

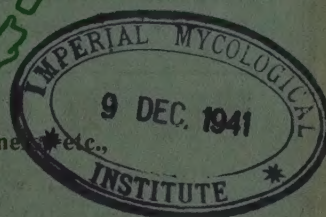
THE FRUIT WORLD

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Vol. XLII.

No. 10

OCTOBER 1st, 1941

Price 6d.

Special Articles This Month

Seasonable Notes on Spraying,
Cross Pollination, etc.

Apple and Pear Acquisition

Culture of Celery and

Other Vegetables

The Market Grower

Murrumbidgee Irrigation Areas

Personal News and Notes

Canned and Dried Fruits

Goulburn Valley (Victoria)

Western Australia

Canadian Apple Industry

Fruit Fly Control

Citrus in Palestine

Spraying with Plant

Growth Substances

South Australian News & Notes

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THE MARKET GROWER

VEGETABLE CULTURE.

Sowing, Thinning and Planting.

Broadly speaking, seeds should be sown twice as thickly as the plants are intended to be grown, and seedlings thinned when quite small.

By keeping the surface soil stirred with the Dutch hoe, weeds are best kept down, and the soil moisture, instead of being evaporated into the air, is conserved for the benefit of the plants.

Runner Beans.

No vegetable better repays for good culture than Runner Beans. A trench 18 inches wide and 18 inches deep should be taken out, and the bottom deeply broken up with a fork. A foot of rich, well-decayed farmyard manure should be placed in the trench.

Three inches of the finest soil taken out should be placed on the manure, and made as fine and level as possible. Sow the seeds in two rows, nine inches apart each way, and cover the seed with two inches of soil.

To obtain good Runner Beans it is essential that the plants be well staked. Mulchings help to prolong the supply of pods, and are most beneficial during hot, dry weather. When the growths reach the top of the sticks cut them off to encourage a branching habit, as this helps to increase the yield of pods. Keep the points of all young shoots pinched out, as this induces the pods to swell quickly.

Lettuce.

Lettuce succeeds on almost any kind of soil, providing it is well dug or trenched and manured. When the soil is in good condition, it should be raked over finely, and the seeds sown thinly in shallow drills one foot apart. When the seedlings are large enough thin them out to nine inches apart. One or two

sowings at intervals of a fortnight should be made to obtain a constant supply.

Thinnings from each sowing should be replanted, as they will be found most useful to follow undisturbed plants. Give abundance of water during dry weather and liquid manure should be given immediately the plants show signs of folding in. Keep the soil stirred between the plants. Good, reliable varieties are Webb's Wonderful and Iceberg.

Radishes.

Radishes will succeed on almost any class of soil, but ground that has been trenched and manured the previous season is the best. Sow in beds broadcast or in drills nine inches apart. For a regular supply seed should be sown every fortnight, sowing the seed thinly, and in no case let them suffer for want of water. The variety French Breakfast is the best short variety for general use, and White Icicle is a splendid long variety.

Spinach.

Spinach can easily be produced during the greater part of the year. Almost any kind of soil will grow Spinach, provided it is well worked and enriched with manure.

Sow in drills one foot apart and one inch deep, and for a regular supply seed should be sown every fortnight. Summer sowings should be made in shady places, and a good plan is that of sowing between rows of Peas or Beans, as the shade afforded by the rows on either side is just what Spinach needs in the hottest weather. Thin when large enough, at first to six inches, and finally, to one foot apart. After thinning, keep the ground stirred with the Dutch hoe.

Carrots.

The Carrot is not only an important crop in every vegetable garden, but the varieties differ

widely in form, and are adapted to meet diverse tastes and varied conditions of soil and climate. For the long-rooted section a deep sandy soil, thoroughly tilled to a depth of 18 inches, is imperative, but for the short varieties a few inches depth of fine loam will suffice.

Do not use fresh manure, as this always tends to the production of fibres and fangs. Prepare the land for Carrots a good time in advance by giving rich manure in abundance for the preceding crop. This treatment saves the necessity of dressing the plots in the year Carrot seed is sown. The soil must be thoroughly well dug, broken fine, and made pliable throughout, whatever the depth may be. The roots will then be clean, excellent in form, and a credit to the grower.

Carrot seed should everywhere be sown in lines, the distances varying with the character of each variety. For the short early sorts six inches will suffice, and the spacing may be increased to 18 inches for main crops of the longest kinds.

Sow seeds of French Beans, Leek, Peas, Pumpkins, Cucumber (long green or Apple shaped), Vegetable Marrow, Melons, Turks' Caps, Sweet Corn, Celery, and Parsnip.

Seed or seedlings of Cabbage, Red and Silver Beet, Onion, and Tomato.

SPOTTED WILT IN TOMATO PLANTS.

A virus disease, spotted wilt is conveyed from plant to plant by various sucking insects under favorable conditions. Although their range of operation is large, these insects can be kept under control by use of sprays and dusts, but seldom is the treatment completely effective.

As the insects can breed in weeds and other plants, Mr. A. G. Strickland, M.Sc. (Chief Horticulturist, Department of Agriculture, Adelaide) advises the raising of Tomato plants well away from any garden plants

and weeds, and after transplanting they should be carefully watched to detect any plant failing to make normal growth. Any such backward plants should be removed and destroyed, even though the typical bronze markings of the disease are not evident at this stage.

DRIED MUSHROOMS.

Export Trade Possible.

Like so many other new industries, the war has created a demand for dried mushrooms. Previously large quantities of dried mushrooms were imported from Europe into U.S.A., and now that supplies have stopped, America is seeking supplies from Australia, says "Food" (Melb.). Even at 1/6 per lb. there is only a modified trade here for fresh fried mushrooms and little outlet for cultivated mushrooms on account of the high cost of production, yet there is a large quantity growing wild in all parts of the Commonwealth. Further particulars are awaited from America about the possible development of this trade.

Agriculture in U.S.A.

Control Plans to Operate.

In an editorial in the "American Fruit Grower" it is stated that American agriculture is to be organised under Governmental auspices into a permanent economic programme; fruit would be included. "Until we get used to it," states the article, "and that may take many years—this new order will prove as uncomfortable as a tight pair of shoes, but even when it hurts the most growers can console themselves with the fact that in preparing a plan for the economic future of the country, those in command could not do otherwise than recognise the primary importance of the fruit industry."

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A Monthly Newspaper published in the interests of the Berry Growers, Deciduous, Citrus, Dried and Canned Fruitgrowers, and Market Gardeners.

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Contents

| Illustrations. | Page | | Page |
|----------------------------------|------|---------------------------------|------|
| C.S. & I.R. Station at Griffith, | | International Apple Association | 14 |
| N.S.W. | 20 | Market Notes and Prices | 25 |
| Drop of Apples and Pears (5 | | Market Grower | 2 |
| Illustrations) | 7-9 | Manurial Experiments | 28 |
| Irrigation Channel, Griffith, | | Murrumbidgee Irrigation Areas | 19 |
| N.S.W. | 19 | News in Brief | 5 |
| Products of the Port Huon | | News of the Month | 3 |
| Fruit Juice Co. | 18 | Obituary | 3 |
| Subjects. | | Queensland | 27 |
| Apple Advertising in U.S.A. . . | 14 | Seasonable Orchard Notes . . | 6 |
| Apple and Pear Acquisition . . | 11 | South Australia | 15 |
| Apple Seedlings | 18 | Spraying with Plant Growth | |
| Canadian Apple Industry . . . | 12 | Substances | 7 |
| Cannery Notes | 21 | Tasmanian News and Notes . . | 17 |
| Citrus in Palestine | 13 | Victorian Crop Prospects . . | 24 |
| Dried Fruits | 23 | Visit to New Zealand | 16 |
| Fruit Fly Control | 27 | Vegetable Growing | 2 |
| Goulburn Valley News and | | Western Australia | 22 |
| Notes | 22 | | |

Index to Advertisers

| | Page | | Page |
|--------------------------------|------|--------------------------------|--------|
| Allan & Anderson Ltd. | 21 | Jaques Pty. Ltd. | 5 |
| A.M.P. Society | 14 | Leggo, Victor, & Farmers Ltd. | 6 |
| Austin, H. C. | 25 | Lightning Fruit Grader Co. | |
| "Australasian Poultry World" | 10 | Cover | |
| | | Limil | 16 |
| Bay View Fruit Picking Bags | 17 | Melbourne Fruit Merchants . | 26 |
| Blyth Chemicals Ltd. | 2 | Neptune Oil Co. Ltd. | 4 |
| Brisbane Fruit Merchants . . | 25 | Nobelius, C. A., & Sons Pty. | |
| Brookes Lemos Ltd. | 22 | Ltd. | 17 |
| Commonwealth Bank | 13 | Paterson & Co. Ltd. | 11 |
| Cooper, W. A. | 24 | Producers' Co-op. Dist. Soc. . | 24 |
| Cooper, Wm., & Nephews | | Russell Burrows Pty. Ltd. . . | 4 |
| (Aust.) Pty. Ltd. | 9 | | |
| Electrolytic Refining and | | Silbert, Sharp & Bishop Ltd. | 15, 16 |
| Smelting Co. of Aust. Ltd. | 10 | Sydney Fruit Merchants . . . | 24 |
| Excelsior Supply Co. | 24 | | |
| | | Trewhella Bros. Pty. Ltd. . . | 20 |
| F. & M.G. Society | 15 | U'Ren, Geo. A. | 14 |
| Goodman, C. J. | 11 | Vacuum Oil Co. | 8 |
| Harvey, Daniel, Ltd. | 10 | War Loan | 18 |
| | | Werner, R., & Co. Pty. Ltd. . | 28 |
| International Harvester Co. of | | Wholesale Fruit Merchants' | |
| Aust. Pty. Ltd. | 12 | Association of Victoria . . . | 27 |

NEWS OF THE MONTH.

THE IMPORTANCE of more fruit and vegetables in the daily diet of Australian citizens is emphasised in the report of the nutrition committee of the National Health and Medical Research Council of Australia. They say that fruits and vegetables contain mineral salts, fibre or roughage for regulating the internal organs, and essential vitamins.

The report states that instead of agriculture occupying the key position as a fundamental basis for national life, energy has been misdirected towards commercial ends. Mechanised industry and chemical treatment have removed healthful ingredients which have resulted in impaired health and an increase in hospital patients through malnutrition. These devitalised products were passed on to the public by means of advertising and salesmanship.

In the daily diet, states the report, there is a shortage of protective foods, such as milk, butter, eggs, fresh fruits and green vegetables. Instead of the public being able to obtain wholemeal bread, the essential vitamin B₁ has been extracted through mechanical and chemical refinement, the product being wholly divorced from dietary needs.

The publicity campaigns carried on by primary producers regarding the health value of their products are attested by competent medical authorities and nutrition experts.

As against this, however, there is a greater weight of publicity on the part of manufacturers of patent medicines, patent foods and synthetic drinks, with the result that over 40 per cent. of school children are suffering from malnutrition. This state of affairs should not be allowed to continue in an enlightened community.

FARM PRODUCTS IN SOUTHERN CALIFORNIA.

Citrus Crops Predominate.

\$63,500,000, representing the sale of farm products, was received by Southern Californian

farmers in 1940—the highest return for several years.

Of this figure £22,200,000 was primarily contributed by the Orange and Lemon crops. The Orange crop, with a value of £13,000,000 took first place among all agricultural enterprises in Southern California.

U.S.A. APPLE CROP.

Forecast is for 125,568,000 Bushels or 10 per cent. Higher than in 1940.

The commercial Apple crop in U.S.A. this season is expected to be around 125,568,000 bushels, which is 10 per cent. greater than the 1940 production of 114,391,000 bushels. The 1941 commercial production would thus be about equal to the 6-year average of 125,310,000 bushels.

OBITUARY.

Mr. A. H. Dickson, a well-known figure in the business life of Western Australia, died at the end of August at the age of 69. As manager of Henry Wills and Co., Mr. Dickson is thought to have been the first fruit shipper from W.A. Mr. Dickson was largely interested in the pastoral industry and other activities associated with rural development. He was chairman of the Honorary Royal Commission on Rural Relief, chairman of the W.A. Dried Fruits Board, a director of the W.A. Shipping Association, and Chairman of the W.A. Fruit Shippers' Committee from its inception in 1919 until his death.

In his private life, Mr. Dickson was prominently associated with the Methodist Church and the Y.M.C.A. He was generous in his benefactions and made a wide circle of appreciative friends. His wife pre-deceased him and he is survived by an only daughter.

MRS. L. KINGSBURY.

The many beautiful floral tributes and the large attendance at the funeral of the late Mrs. L. Kingsbury on Friday, September 19, spoke eloquently of the esteem in which she was held by a wide circle of friends

in the Kilsyth and Croydon (Vic.) districts, where she was a resident for 12 years.

The death of Mrs. Kingsbury was particularly sad and unexpected, as she was making satisfactory progress after a recent operation and hoped to leave hospital within a few days.

The deceased is survived by her husband, Mr. L. Kingsbury, well-known orchardist, of Mt. Dandenong-road, Kilsyth (Vic.), and a son, to whom sincere sympathy is extended.

Mr. Dan. Wuille.

Mr. Dan. Wuille, Chairman of the Board of Dan. Wuille and Co. Ltd., Covent Garden, London, died at the end of July at his home in England. He had been ill for a long time.

His death caused deep regret among the members of the fruit trade in England, also in

America. Mr. Wuille was President of the firm bearing his name in New York City.

The headquarters of the firm are in London, and there are branches at Liverpool, Glasgow, Hull, Manchester, Bristol, and Cardiff.

Mr. Wuille was widely esteemed. Apart from his interests in the fruit business he was a great flower lover. He paid a visit to Australia several years ago and made many friends.

Hon. Sir James Parr.

English papers recently to hand pay a tribute to the late Hon. Sir James Parr, High Commissioner in London for New Zealand from 1926 to 1929, and from 1934 to 1936. He died at Berkhamstead, England, in May. Sir James Parr rendered distinguished service in the promotion of Empire trade.

Mr. A. A. Campbell.

Australian agriculture loses a strong exponent with the passing of Mr. A. A. Campbell, director and general sales manager of H. V. McKay Massey Harris Pty. Ltd., who died suddenly at his Melbourne home on September 11.

Born in Canada in May, 1875, Archibald Campbell joined the Massey Harris Company, Toronto, as a young man, and gained experience of agricultural machinery in all departments of the Massey Harris factories.

He first came to Australia and N.Z. as special salesman prior to the world war.

In September, 1930, the Massey Harris Company's Australian business was merged with that of H. V. McKay Pty. Ltd., Sunshine Harvester Works, Sunshine, and Mr. Campbell was appointed general sales

manager of the new company—H. V. McKay Massey Harris Pty. Ltd., with a seat on the directorate.

Mr. Campbell earned the respect of farmers and machinery men in all States for his sound counsel and for his successful efforts to foster the production of specialised farm machinery to meet the changing needs of modern farm practice.

Mr. Campbell was an active member of the Rotary Club of Melbourne, and was Vice-President Elect at time of his death.

He leaves a widow and two daughters in Australia, one daughter being the wife of Dr. H. Boyd Penfold, of Melbourne, while a son is resident in Canada.

PERSONAL.

NEW FEDERAL CABINET.

The Labor party has taken over the reins of Government. The new Prime Minister is Mr. J. Curtin (W.A.); Treasurer, Mr. Chifley (N.S.W.); Minister for Commerce, Mr. Scully (N.S.W.); Minister for Trade and Customs, Senator Keane (V.); Repatriation and War Service Homes, Mr. C. W. Frost (Tas.).

:: :: ::

At the recent annual conference of the International Apple Association held at Toronto, Mr. R. G. Phillips was re-elected Secretary. Mr. Phillips has held this position for 30 years and is widely esteemed.

:: :: ::

Mr. W. J. Prendergast, London representative of the Renmark Growers' Distillery, recently thrilled an audience at Renmark (S.A.) with an account of the bravery of British people during bombing raids. The vote of thanks was proposed by Mr. W. F. H. Edmonds (Vice-President of the Renmark Growers' Distillery), seconded by Mr. R. Fisher (a member of the Board), and supported by Mr. I. L. Johnson.

NEWS IN BRIEF.

As a result of the recent poll in N.S.W., egg marketing control will be extended to the whole of the State.

As Spraying is a Necessity —then use the World's Best—

NEPTUNE SPRAYS...

The better quality of NEPTUNE Sprays is always obvious by comparison with others. NEPTUNE Sprays conform to the highest standards, and they are consistently uniform in strength and quality. Successful Orchardists recommend them. Try them yourself and prove that they're better!

NEPTUNE WHITE SPRAYING OIL (SUMMER SPRAY)

NEPTUNE PREPARED RED
SPRAYING OIL

("A," "C," or Heavy Base)

NEPTUNE PALSOL
(Prepared Pale Oil)

NEPTUNE CLARIFOL
(Winter White Oil)

NEPTUNE LIME SULPHUR
SOLUTION

(Clear, amber - coloured, free
from sludge)

GENUINE MACCLESFIELD
BLUESTONE

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(23871)

BERGER'S ARSENATE
(Powder or Paste)

COLLOIDAL LEAD
ARSENATE

ENGLISH BLUESTONE
SNOW

GENUINE BLACK
LEAF 40

NEPTUNE LIME
POWDERED SULPHUR

COPPER SPRAY

NEPTUNE SPRAY
SPREADER



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BAVE-U POWER SPRAYER



All models can be fitted with
pneumatic tyres at little extra cost.

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Pty. Ltd.**

Box Hill, E.11 Victoria

NEWS IN BRIEF.

There has been a substantial increase in the sales of Apples in Tasmania this season. In 1940 the sales were 110,000 cases: up to the end of August, 1941, the sales were 139,000 cases.

A light crop of Apples and Pears is forecast in S. Aust. in 1942.

The N.S.W. Greengrocers' Association is seeking the compulsory closing of fruit shops at 6 p.m., and no Sunday trading.

"Forestalling" is said by some to be prevalent in the Sydney markets to the detriment of growers, sellers and the public. City Council authorities deny the allegations.

The shortage of case timber in Tasmania is causing alarm, particularly as growers cannot order, not knowing whether there will be an acquisition plan in 1942.

"V" for vegetables is the slogan on the Murrumbidgee Irrigation areas where growers have agreed to grow navy beans and many other vegetables.

To overcome the problem of nitrogenous fertilizer, growers are now urged to pay more attention to the growing and turning under of green manure crops.

Mr. C. W. Frost, M.H.R., told the Tasmanian State Fruit Board that the cause of shortage of cool store space for Apples was that the space was being used for meat and other products and that fruit was "squeezed out."

A normal crop of Valencia Oranges is showing on the Murrumbidgee Irrigation Areas and the quality is good.

The Tasmanian State Fruit Board is pressing for an early announcement by the Federal Government favoring the acquisition of the 1942 Apple and Pear crop.

The U.S.A. commercial Apple crop for 1941 is estimated at 125,568,000 bushels, which is 10 per cent. more than last year, and is equal to the six-year average.

A campaign for advertising Queensland Bananas has been authorised.

Particulars of the successful Fruit Fly lure developed in Queensland are given in this issue.

The canning of vegetables has received a big impetus because of the needs of the fighting forces.

Long term manurial tests in New Zealand have shown the value of complete fertilizers—nitrogen, potash, phosphate.

Because of the shortage of cold store space for Apples in N.Z., studies have been made by the Cawthron Institute regarding storage in cool orchard sheds.

In one State in U.S.A. (Washington, Pacific Coast), the sum of \$35,000 is spent annually on Apple advertising. Plans include press, radio, posters, "dealer service," motion picture films, and scientific brochures for doctors, dietitians, etc.

There was a strong demand for factory Lemons and factory Oranges in W.A. this season.

The spraying of Apple and Pear crops with a-naphthalene acetic acid at near-maturity has proved successful in Australia and in U.S.A. in reducing the near-maturity fruit drop.

Western Australian Apple and Pear growers, in annual conference unanimously affirmed the necessity for the continuance of the acquisition plan.

There have been substantial developments in Canada in using Apples for by-products. Over 5½ million bushels were used in

this way in 1939, and nearly 4 million bushels (from a much smaller crop) in 1940. Apple juice production has been considerably increased.

Because of constant vigilance, Western Australian orchards remain free from Black Spot.

By means of advertising, the Canadian consumption of Apples and Apple juice has been increased. The pomace from skins and cores were sold.

The Annual Griffith (N.S.W.) Spring Show will be held on October 7 and 8, 1941, the Secretary is Mr. C. P. Stanton.

Although a record quantity of canning fruit was harvested last season on the M.I.A., it is expected that the coming harvest will be heavier as new areas of Peaches are coming into bearing.

The U.S. Government purchased 8½ million bushels of Apples and over 1,500,000 bush. of Pears in the 1940-41 season.

ADVERTISING BANANAS.

The need for advertising Bananas was stressed at a meeting of the Carol Branch of the Banana Growers' Federation recently. A resolution favoring this procedure was adopted. It was stated that by imposing a levy of 6d. a case, a fund of nearly £40,000 a year could be created, which would finance an adequate publicity campaign. Now was a golden opportunity to increase Banana sales, as import restrictions were making additional income available for the purchase of Australian produce, but no appreciable increase in the per capita consumption could be expected unless the industry went after the trade.

VICTORIA.

Soil Conservation Competition. A silver cup, to be the prize in a soil conservation competi-

tion, will be donated by Mr. Harold Hanslow (a commissioner of the Water Supply Commission). The area of the contest will embrace the shires of Mansfield, Benalla, and Shepparton.

FAMOUS APPLE TREE DIES.

The Original "Delicious." Planted in 1872, the grand old tree which produced the first Delicious Apple succumbed to a sudden freeze last Winter at Winterset, Iowa, U.S.A.

Almost seventy years old, this famous tree—a seedling—has been visited by men and women from all parts of the world. Originally its fruit was known as the Hawkeye Apple.

DECLINE IN CANADIAN APPLE CROP.

11,652,600 bushels is the estimate of the Dominion Bureau of Statistics for the 1941 Canadian Apple crop, representing a decline of approximately 10 per cent. when compared with last year's figures (12,896,900 bush.). This is the lightest crop since 1940, and compares with the five year average (1936-40) of 14,442,000 bushels.

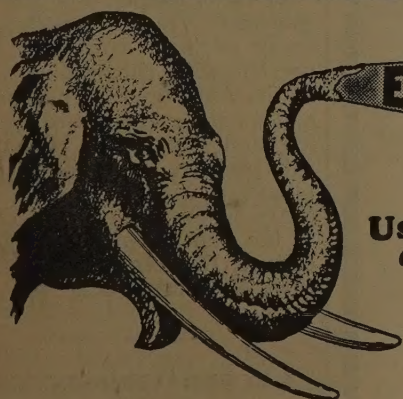
FRUIT CROPS ENDANGERED BY PETROL SHORTAGE.

It is considered that fruitgrowers should receive special consideration in any imminent increase in petrol rations. Reports from several States indicate that the acute petrol shortage is hampering the proper spraying of trees in some orchards, with the consequent possibility of greatly reduced crops.

PRICE OF CLING PEACHES.

Increase to Growers of £1 a Ton.

The Fruit Industry Sugar Concession Committee has decided that the minimum price for Cling Peaches of canning quality for the 1941 season will be increased from £11 to £12 per ton.



ELEPHANT BRAND SPRAY

Use
"ELEPHANT" Brand
Arsenate of Lead—Quality Stands Alone.

We can supply all your Spray Requirements—ARSENATE OF LEAD (Paste or Powder), SPRAY SPREADER, SPECIAL COPPER MIXTURE, LIME SULPHUR, WHITE OIL, NICOTINE SULPHATE, RED OIL, Etc.

Extract from "BETTER FRUIT," by Dr. R. L. Webster, Entomologist, State College of Washington, Pullman: CODLING MOTH COVER SPRAYS—"Ever since the imposition of an arsenic tolerance in 1926, and even before that time, investigators have been testing other materials which may be used in place of lead arsenate. Following all these intensive and extensive investigations lead arsenate appears to have certain inherent qualities which place this material foremost as an insecticide for codling moth control."

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"ELEPHANT" Brand Sprays.

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Q'ld.—Busacott's Ltd., Adelaide Street, Brisbane.
S.A.—Silbert, Sharp & Bishop Ltd., Rundle St. E., Adelaide.
W.A.—Westralian Farmers' Ltd., 569 Wellington St., Perth.
N.Z.—Plazey, McInnes Ltd., Box 1114, G.P.O., Auckland.

Tas.—Sole Agents, E. R. Cottler Pty. Ltd., Davey St., Hobart; Exeter, West Tamar; also at Devonport and Latrobe.

**Insist
Upon it!**

FRUIT GROWERS generally have come to depend on "Elephant" Brand Sprays. They find them absolutely reliable, efficient and of guaranteed quality.

Seasonable Orchard Notes

SPRAYING :: CROSS POLLINATING CHERRIES.

By J. L. Provan, B.Agr.Sc., Senior Horticultural Instructor, Victoria.)

OCTOBER is an important month for the control of codling moth of Pears. The majority of the mid-season and later flowering varieties of Pears complete their blossoming periods, and the calyx spray of arsenate of lead should be applied before the calyx closes and the Pears begin to droop. Normally, from two to three weeks should elapse from the time of "petal fall" until the period of spraying. The arsenate of lead spray can be delayed until such time as the calyx is still open and the fruit erect.

As a large percentage of codling moth infection of Pears occurs either through or near the calyx, it is very important that a good coverage of arsenate of

lead be given at this stage. The addition of a small amount of white oil—say half a gallon in 80 of water — or an efficient spreader will assist in the wetting and coverage of the calyx end of the developing fruit. The calyces should be examined to ascertain how thorough the application has been. The use of rods and the direction of the spray downwards and into the calyces assist in obtaining a good coverage of the fruit at this stage.

For many years, Emperor Mandarins have been arriving on the Melbourne market in a somewhat crushed condition, and steps have been taken to remedy this. The long bushel

case (26 in. x 6 in. x 14½ in. inside measurements clear of the division) is now being used, and a new Mandarin packing chart has been drawn up for distribution to growers and packing houses. Copies of this chart may be obtained, on application, from the Director, Department of Agriculture, Melbourne, C.2.

The late-flowering Cherries, complete their blossoming period early this month. For cross-pollinating, Bigarreau Napoleon; use Florence; for St. Margaret use Windsor. The Cherry tree requires cross-pollination, and it is very necessary to provide pollen from compatible, synchronous blooming varieties, for this purpose. This can be provided by either placing the blossoms in the trees as a temporary measure, or in a more permanent form, by budding, or grafting scions of suitable varieties on to the trees to be pollinated. This will provide pollen for future years, but is, of

course, not of any value for the first two years after the work is completed.

Nicotine sulphate, 1 pint in 80 gallons, plus 2 lb. of soft soap, will be found a very effective spray for the control of aphids at this period of the year. It is important that the spray should be applied before the insects become too numerous, and certainly before very much curling of the leaves takes place. The curling of the leaves shelters the insects from contact with the spray and makes control very difficult.

If the Pear and Cherry slug is also present on Cherry trees, an arsenate of lead spray, 2 lb. (paste) in 80 gallons of water, plus 1 lb. of calcium caseinate spreader, can be added to the nicotine sulphate, but, if this is done, the soft soap should be omitted from the combined spray. It is advisable to apply a lead spray before the fruit is half grown, otherwise the residue problem will have to be faced when the fruit is harvested. If a late infestation of Pear and Cherry slug occurs control by arsenate of lead sprays should be postponed until after harvesting.

For the control of brown rot of Peaches, the usual dry-mix lime sulphur spray, 25 lb. in 100 gallons, should be applied when the "stockings" fall from the developing fruit. If necessary, nicotine sulphate, 1 pint in 80 gallons, can be combined with the dry-mix lime sulphur for the control of green and black Peach aphids at this time of the year. The early control measures are usually the most effective to deal with these pests.

Codling moth lures should be in position on the trees about the middle of the month. The most effective lure is the 10 per cent. solution of sweet wine (of the port type) or sweet wine lees may be used. The latter substance is the dark-colored liquid which remains in the wine vats after the bulk of the clear wine has been racked off. Apple juice or vinegar at the same dilution may also be used.

It is proposed this year to continue the departmental spray advisory services in connection with the codling moth in the Apple and Pear districts, and growers who are experiencing difficulty in the control of this pest are requested to communicate with their local orchard supervisor, or write direct to the Superintendent of Horticulture, Department of Agriculture, Melbourne, C.2.

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Spraying with Plant Growth Substances

MEANS OF REDUCING NEAR-MATURITY FRUIT DROP.

(By A. G. Strickland, M.Ag.Sc. (Chief Horticulturist), H. K. Kemp, B.Ag.Sc. (Hons.) and J. A. Beare, B.Ag.Sc. (Research Officers), in S. Aust. "Journal of Agriculture.")

Recent trials have shown the value of plant growth substances when applied as a spray to Apple and Pear trees for the purpose of reducing the natural drop of fruit at or near maturity. One spray applied approximately a fortnight before the anticipated date of picking appears to be a worthwhile and payable precautionary measure. On selected varieties prone to excessive pre-harvest drop, sprays of growth substances should quickly find a definite place in the orchard routine of pome fruitgrowers.

THE USE OF PLANT GROWTH substances such as a-naphthalene acetic acid for reducing the natural drop of Apples at or near maturity was first investigated by Gardner, Marth, and Batjer (1), at the U.S. Horticultural Station, Beltsville. Various plant growth substances have been used extensively for the purpose of inducing rootings of cuttings of a number of plant species, and in the course of research it had been noted that cuttings treated with growth substance retained firmly the petiole stubs of leaves long after untreated cuttings had shed such stubs. This observation, together with other observations of similar effects, showed growth substances to have the capacity of delaying the shedding of various plant organs, and inspired workers at Beltsville to test the power of sprays containing naphthalene acetic acid or other growth substances to delay or reduce the shedding of Apples during the period of approaching maturity.

During a visit to United States in 1939, one of the authors of this note was privileged to see, during the latter portion of the harvest period, the first field experiment conducted on Apples by the Beltsville workers.

Results were most striking, unsprayed trees being practically devoid of fruit, whilst sprayed trees were carrying late hanging crops of fully colored Apples.

One could not fail to be impressed with the practical possibilities of the treatment, and during 1940-1941 preliminary trials were carried out in South Australia with a view to investigating the effect of spray application of a-naphthalene acetic acid in delaying maturity drop of Apples and Pears.

Grapefruit trees were also sprayed with the object of holding the fruit on the tree further into the Summer season of enhanced prices; however, in the first season's trials such spray

did not appear to have any controlling effect on dropping.

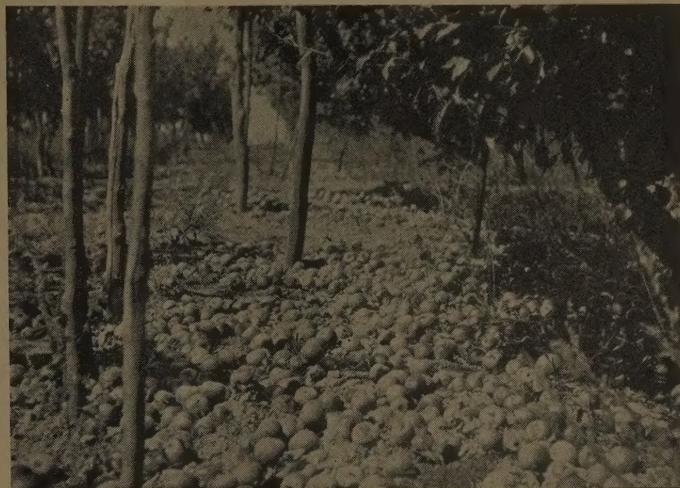
A-naphthalene acetic acid in the pure form was unobtainable in Adelaide, and through the courtesy of the University of Adelaide a quantity sufficient for trials was synthesised.

For use as a spray, the pure material was first dissolved in methylated spirits to make a 1 per cent. solution. This concentrated spirit solution was added to water in the spray vat to give a spray concentration of 0.002 per cent. (20 parts per million).

In two trials a commercial growth substance product, which contains a-naphthalene acetic acid and is normally sold for use as an aid to rooting of cuttings, was used. This product was used at a concentration calculated to give a strength equivalent to that used in the case of the synthesised material.

Except in the case of trials with Grapefruit, white oil was added to the spray mixture at the rate of 4 pints per 100 gall., such addition having been shown in American work to increase the efficiency of the treatment.

In their work at Beltsville, Gardner, Marth, and Batjer found that growth substance sprays retained their effectiveness for a week to 3 weeks after application, according to variety, and in the experiments here described, sprays were repeated at intervals of 2 weeks, and observations on dropping continued in some instances over a period much longer than the normal or commercially desirable picking period. In application, the spray was directed chiefly downward and through the trees in order to achieve maximum wetting of the stems and stem cavities of the fruit. Immediately after spraying, all windfall fruit was cleared from under trees and subsequent falls were recorded at intervals.



Drop of Jonathan Apples in an orchard at Balhannah as a result of heat wave during March, 1940.

Trial with Williams Bon Chretien (Duchess) Pears.

On the property of H. N. Wicks, Balhannah, 10 Williams Pear trees were sprayed, and the drop therefrom contrasted with that from 9 comparable unsprayed trees.

Three spray applications were made on January 20, February 4, and February 17 respectively, approximately 4 gall. per tree being used in each instance. The accumulated drop expressed as a percentage of total crop is shown at weekly intervals in Table I. and illustrated graphically in Fig. 1.

Table I.—Cumulative Percentage Drop of Duchess Pears at Balhannah.

| Date. | 28th | 4th | 10th | 17th | 24th | 3rd |
|---------------------|-------------|-------------|-------------|-------------|-------------|--------------|
| | Jan., 1941. | Feb., 1941. | Feb., 1941. | Feb., 1941. | Feb., 1941. | March, 1941. |
| | % | % | % | % | % | % |
| Unsprayed | 8.43 | 9.89 | 18.63 | 41.05 | 45.56 | 62.68 |
| Sprayed | 7.44 | 7.54 | 7.86 | 9.45 | 11.58 | 26.5 |

Reference to Table I. indicates that the first spray applied on January 20 was early, and although sprayed trees showed a slightly decreased drop, the loss of fruit was not great from either treated or untreated trees.

The second spray applied on February 4 appears to have been well timed, although its apparent effect may have comprised some residual effect of the first spray.

Two weeks after the second spray application, i.e., on February 17, sprayed trees had dropped only 9 per cent. of fruit,

as compared with a loss of 41 per cent. from unsprayed trees.

Williams Pears for canning or drying are usually harvested towards mid-February, and at this time the naphthalene acetic acid sprays had saved over 30 per cent. of the crop.

Although the normal harvesting period does not extend much beyond mid-February, a further spray was applied on February 17, and observations continued until early March.

Although of little commercial significance, the figures for relative drop on February 24 and March 3 are of interest, and

show the remarkable effect of the spray application in enabling trees to hold Pears even after marked ripening.

Trial with Red Gravenstein Apples at Forest Range.

A further trial was conducted with Red Gravenstein Apple trees on the property of Messrs. Cramond Brothers, Basket Range. Four trees were sprayed with a-naphthalene acetic acid, 4 with the commercial product referred to earlier in this note, and a further 4 trees were left unsprayed. Investigations in United States have indicated that a-naphthalene acetic acid tends to be most effective when used in acid solution, and as the spray water used in this experiment was definitely alkaline, sufficient citric acid was added to the spray mixture to make it acid when tested with litmus paper.

The trees in this trial were comparatively small, and effective coverage was obtained with 2 gall. of mixture per tree.

Spray applications were made on January 10, January 28, and February 18, and results are shown in Table II. and Figure 2.

There was a marked reduction in fruit drop following the appli-

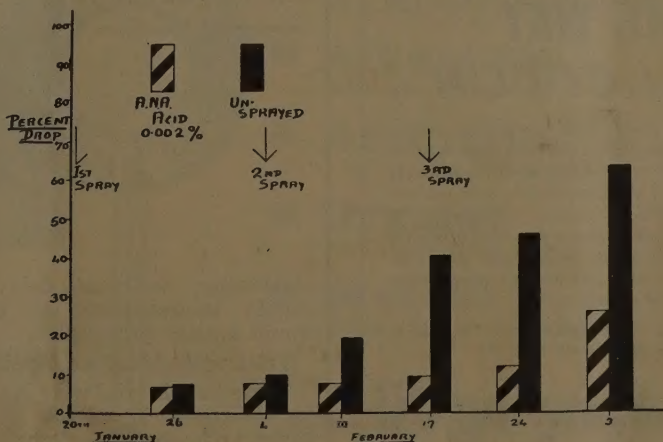


Fig. 1—Cumulative percentage drop of Williams Bon Chretien Pears at Balhannah.

Table II.—Cumulative Percentage Drop of Red Gravenstein Apples.

| Date. | January. | | | | February. | | | |
|--|----------|-------|-------|-------|-----------|-------|-------|-------|
| | 16th. | 18th. | 25th. | 28th. | 4th. | 10th. | 18th. | 24th. |
| Unsprayed | % | % | % | % | % | % | % | % |
| Sprayed with commercial growth substance preparation | 6.45 | 9.47 | 26.23 | 40.10 | 48.52 | 63.56 | 79.57 | 90.37 |
| Sprayed with a-naphthalene acetic acid | 2.16 | 3.57 | 11.81 | 16.01 | 23.46 | 27.87 | 38.92 | 44.67 |
| | 1.15 | 2.41 | 11.41 | 16.79 | 25.51 | 30.11 | 41.18 | 48.29 |

cation of a-naphthalene acetic acid or the commercial product. On January 28, nearly 3 weeks after application of the first spray, treated trees had lost only 16 per cent. of crop through dropping, as compared with a loss of 40 per cent. from unsprayed trees.

As in the case of the trial with Williams B.C., further

sprays were applied and observations continued well beyond the commercial marketing period. On February 24, unsprayed trees had dropped 90 per cent. of their crop, whilst sprayed trees had lost only 44 per cent. and 48 per cent. respectively.

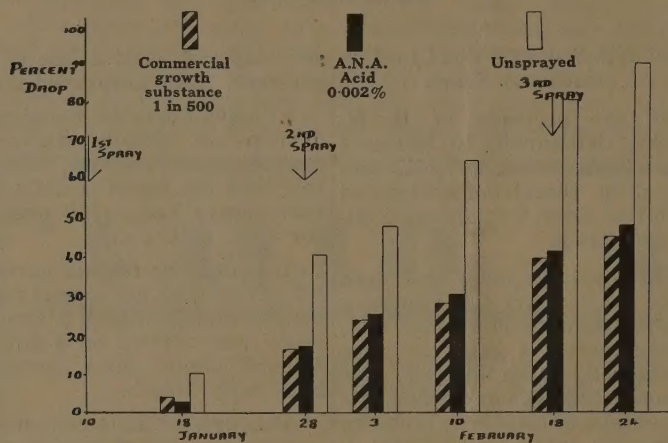


Fig. 2.—Cumulative percentage drop of Red Gravenstein Apples at Basket Range.

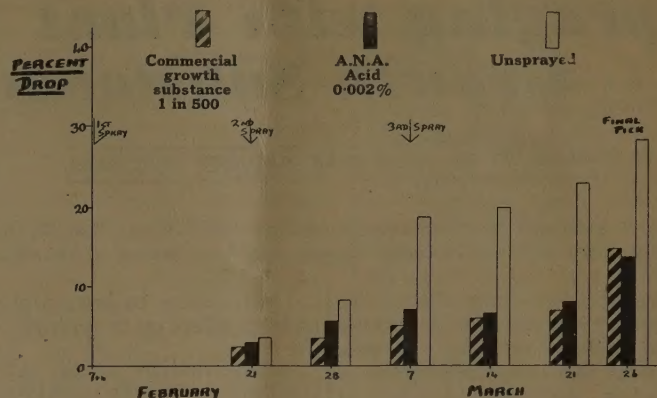


Fig. 3.—Cumulative percentage drop of Jonathan Apples at Kersbrook.

When final records were taken in March, well beyond normal harvesting periods in the case of both Williams Pears and Gravenstein Apples, unsprayed trees were practically bare of fruit, whilst sprayed trees still carried 20 to 30 per cent. of the original crop. Whilst the fruit remained on the trees, however, maturation and senescence had proceeded and the bulk of fruit—especially Pears—was completely rotted, although still firmly attached to the tree. The flesh of Pears generally liquefied and the fruit elongated, being held by stems and skins; sometimes the skin and liquid contents fell, leaving the stem and central vascular tissue still attached to the tree. Similarly, in the case of Apples, the flesh sometimes rotted and sloughed away, leaving the core still firmly held on the tree.

Whilst spraying with growth substance will reduce the often considerable near-maturity drop of Williams Pears or Gravenstein Apples, picking should still be conducted with due consideration of maturity. Any undue delay would result in over-mature fruit, but in the case of Red Gravenstein for quick local

lene acetic acid, 6 with the commercial growth substance product, and 10 trees were unsprayed. All trees were very heavily cropped, the average per tree being in the vicinity of 9 bush. to 10 bush.

Three sprays (rate approximating 3.5 gall. per tree) were applied on February 7, February 21, and March 3. The fruit was harvested on March 25 and 26.

Both spray schedules were responsible for reduction in drop of the order of two-thirds (see Table III.). On account of favorable weather conditions during the maturation period, the drop from unsprayed trees (23.8 per cent. as at March 25) was less than that experienced in many seasons. Nevertheless, the spray treatment resulted in a saving of crop amounting to approximately 1½ bush. per tree.

As judged by ground color, the sprays did not appear to have influenced the normal onset of maturity. However, representative lines of fruit from each series of plots have been placed in cold store with a view to determining whether the spray treatment has any effect on keeping quality.



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Pear trees at Balhannah sprayed with growth substances (top) and unsprayed (lower). Photo. taken in March, when practically all fruit had fallen from unsprayed trees.



marketing, sufficient delay to enable improvement in color would appear practicable.

Trial with Jonathan Apples.

Trees in this trial were located on the property of Mr. S. M. James, Kersbrook. Ten trees were sprayed with a-naphtha-

Cost of Spraying.

Throughout these experiments, a-naphthalene acetic acid has been used at a concentration of 20 parts per million. However, recent results published by the Victorian Department of Agriculture (2), also the results

Table III.—Cumulative Percentage Fruit Drop of Jonathan Apples at Kersbrook, 1941.

| Date. | February. | | | March. | | | |
|--|-----------|-------|-------|--------|-------|-------|-------|
| | 18th. | 21st. | 28th. | 7th. | 14th. | 21st. | 25th. |
| | % | % | % | % | % | % | % |
| Unsprayed | 2.30 | 3.46 | 8.37 | 18.83 | 20.16 | 22.91 | 23.81 |
| Sprayed with a-naphthalene acetic acid | 2.18 | 2.80 | 3.95 | 5.73 | 6.82 | 8.21 | 8.67 |
| Sprayed with commercial growth substance preparation | 1.73 | 2.33 | 3.42 | 5.13 | 6.09 | 7.12 | 7.44 |

of Gardner, Marth, and Batjer, indicate that this is probably much higher than necessary, and that equally good results may be obtained with 5 to 10 parts per million. In the only form at present available commercially in Australia, i.e., growth substance prepared for stimulation of rooting in nursery work, a-naphthalene acetic acid would cost £2 per 100 gall. of spray at a concentration of 10 parts per million, or approximately 1/6 per tree for each spray applied.

Manufacturers, however, are investigating the possibility of increasing production and packaging in a cheaper form, which will cause marked reduction in cost to fruitgrowers. The possibility of local manufacture of the substance is also being investigated.

Although in these experiments 3 sprays were applied, this should not be necessary in commercial practice, as the spray retains its effect on most varieties for a period up to 2 to 3 weeks, and the bulk of the

drop, sprays of growth substance should quickly find a definite place in the orchard routine of pome fruitgrowers.

References.

1. F. E. Gardner, Paul C. March, and L. P. Batjer. "Spraying with Plant Growth Substances for Control of Pre-harvest Drop of Apples." American Soc. Hort. Sc., Proceedings for 1939, p. 415.
2. C. E. Cole, B.Agr.Sc., and D. M. McAlpin, B.Agr.Sc. "The Pre-harvest Drop of Fruit—Reduction by Spraying." Journal. Dept. Agr., Vic., XXXIX. 5, May, 1941.

WEDDED TO TRUTH.

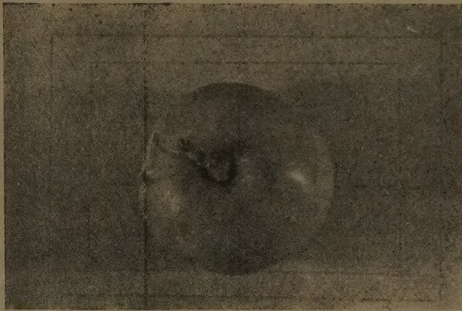
A witness was being examined. "My Lord," he said, "you can believe my statement, for what I have said is absolutely correct. I've been wedded to truth since my childhood." "Quite possible," replied the judge, "but what the court wants to know is how long you have been a widower."



Pears which remained on the trees until March were held mainly by stems and skins, the rotted flesh having liquefied and the fruit elongated.

windfalls on varieties which tend to fall heavily are lost normally within that period. Further experience should enable more accurate timing of the sprays, so that only one, or in exceptional circumstances three sprays, should be necessary to check most of the heavy drop which frequently occurs just before picking of varieties such as Jonathan, Gravenstein Apples, and Williams Bon Chretien Pears.

On the basis of the experiments here and in other centres, one spray applied approximately a fortnight before the anticipated date of picking appears to be a worthwhile and payable precautionary measure. Used at the lower concentration of 5 to 10 parts per million and with white oil at a lower concentration—1 pint per 100 gall. gave satisfactory results in Victoria—the cost of material in such a spray should not exceed 9d. to 1/6 per tree at present prices of material. On selected varieties prone to excessive pre-harvest



A pronounced thickening of the stem was observed on many fruits sprayed with growth substances.

FOG-SPRAY LITTLE LEAF TREATMENT PROMISING.

Results to date from a series of fog-spray test plots in the San Joaquin Valley, California, on Little Leaf affected vineyards indicate that this economical method of applying zinc solutions has promise, states the "Pacific Rural Press."

Where vines show clear-cut little leaf symptoms at time of treatment in May, they now have considerably improved.

If the fog-spray treatment will protect the vines for a full season it may replace spur painting. It may also offer a practical treatment for Thompson Seedless which does not respond to wound painting.

[The Thompson Seedless in California closely resembles the Sultana as grown in Australia.]

PUBLICATIONS RECEIVED.

We acknowledge having received the following publications:—

Cawthron Institute, Nelson, New Zealand: 1940 Annual Report giving a review of the Institute's activities and dealing with valuable investigations and research carried out during the year. These include soils, pasture surveys, fruit research (magnesium deficiency of

Apples, citrus, etc.), fruit storage, pest and disease control, Tomato investigation, etc.

Council for Scientific and Industrial Research: Pamphlet No. 108 concerning studies on some Ectoparasites of sheep and their control.

WHEN USING CAUSTIC SPRAYS.

How to Save the Hands.

Mr. C. O. Smith, a well-known fruitgrower, of Woodbridge, Tasmania, sends in the following hint:

As the spraying season is now on us and many people suffer from the caustic action of lime sulphur and Bordeaux mixture on their hands, I think this simple means of preventing trouble should be more widely known and used. Just rub the hands with a rotten Apple a few times during the day, leaving a layer of the pulp on the backs of the hands and wrists. The acid of the Apple is sufficient to counteract the caustic nature of the spray and washes off easily. Of course, any other weak acid would do, but I understand rotten Apples are rather plentiful in most orchards this season. I have used this myself for years and never suffer from chapped and burnt hands.

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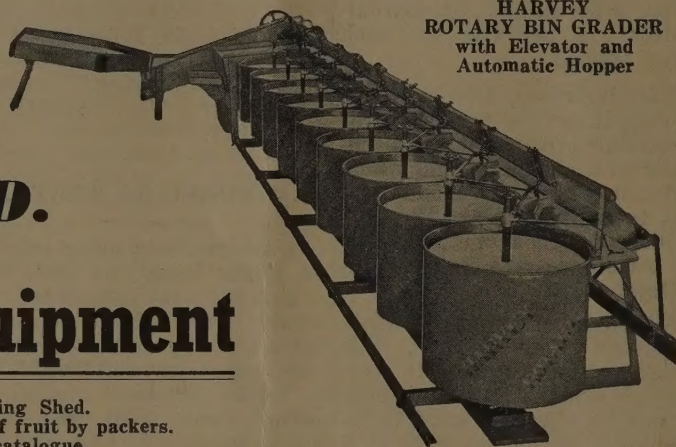
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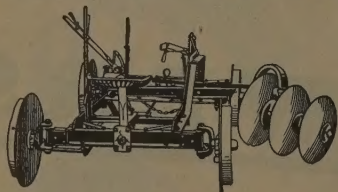
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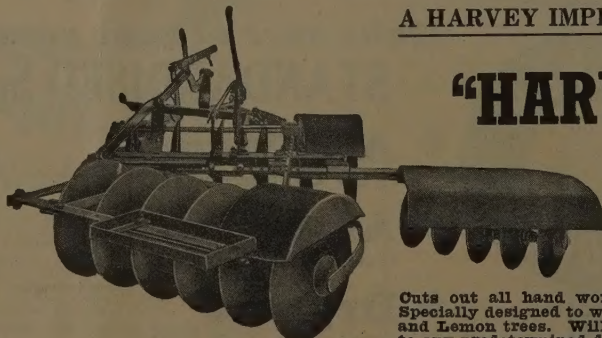
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Apple & Pear Acquisition

THE FRUITGROWERS' AND PRIMARY PRODUCERS' DEFENCE LEAGUE OF AUSTRALIA.

The Editor,
"Fruit World."

Dear Sir,

Would you please insert the following League activities.

Following on a highly successful conference held at Dandenong on August 29, the first meeting of the new Council of the League took place on September 16, there being representatives present from branches all over the State. At this meeting plans were formulated for combating the compulsory control of marketing by means of Boards, etc.

The League Executive was appointed as follows:—President, Mr. V. A. H. Clark (Pakenham); Vice-Presidents, Cr. Hillhouse and Mr. J. H. Tainton; Hon. Secretary and Treasurer, Mrs. R. Serpell; Committee, Cr. Adams (East Doncaster), Mr. G. Handasyde (Wantirna South), Mr. Crowe (Red Hill district), and G. J. Schulze (Geelong district).

With the object of joining forces with the Fruitgrowers and Primary Producers' Defence League of Australia, potato growers of the Dandenong district convened a public meeting at the Dandenong Town Hall, the President of the Shire, Cr. Loller, being in the chair. Potato growers were extremely hostile in their remarks about the Minister of Agriculture, Mr. Hogan, for his having been instrumental in putting the industry under Board control without growers being entitled to vote on the issue. Egg producers and Apple and Pear growers gave supporting speeches against the growers being deprived of ownership of their product, explaining the evils attendant upon such schemes, such as the fact that, while growers are receiving at the very outside 3/6 per case for Apples, the Board is now quoting Apples at 15/- per case wholesale. The Board has also admitted having ordered the destruction of 7,000,000 cases of fruit this season. At the same time they show a debit balance up to 30/6/41 of over £1,000,000.

Mr. Clark, President of the League, said that it was a move to socialise primary production by a back door method.

Messrs. Gartside and Isaac, Ms.L.C., expressed opposition to Marketing Boards on account of their bureaucratic tendencies. Mr. Field, M.L.A., was also present and expressed a desire to help growers in their difficulties under the trying circumstances.

The meeting was also supported by representatives of the Market Gardeners' Association. At the conclusion of the meeting, two secretaries were kept busy enrolling members eager to join in the fight against yet another encroachment on their liberty. Cr. Mills was elected President of the branch and Mrs. R. Winstone, Hon. Secretary.

E. SERPELL, Hon. Sec.

Fruitgrowers' and Primary Producers' Defence League of Australia.

Doncaster, Sept. 22, 1941.

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The foregoing was submitted to the Secretary of the Apple and Pear Marketing Board (Mr. H. A. Baker), whose comments are as follow:—

"Mrs. Serpell apparently is determined to continue showing the difference between nett returns to growers and gross market realisations despite the laws of arithmetic. Growers receive payment for the bare fruit, but the nett realisation includes the cost of cool storage, cartage, cases, packing and selling — which costs are a debit against the scheme and not against the grower. The price of 15/- may have been for some extra choice quality of a particular variety in demand, but the average market realisations at the period were 9/0³/₄d. per case.

"It is very easy for Mrs. Serpell to say in a year like this that the Board 'ordered the destruction of 7,000,000 cases.' As a matter of fact we do not admit this. What we did say is that growers were paid for 7,000,000 cases in the basis of tree measurement. Does Mrs. Serpell think that with no export markets the extra Apple crop could be sold? I venture the opinion that the sales of

Apples this year in Australia are a record. Unfortunately, statistics for former years are not available, but for two States at least where comparisons can be made the quantities marketed are a record.

"I repeat that chaos is the alternative to some control system. In my evidence before the Parliamentary Enquiry Committee I quoted press references to the glut of Apples in 1928 and 1937, the ruinous prices resulting in losses to growers and enormous wastage (despite the markets of the world being open). See September "Fruit World," p. 9-11."

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Commenting on the foregoing, Mr. J. M. Ward, Supt. of Horticulture, and Chairman of the Victorian Potato Committee, states that at the beginning of the present season the estimated Victorian potato crop was 260,000 tons, whilst the average annual consumption was 120,000 tons (in addition to 20,000 tons usually sent interstate). Accordingly the Victorian Potato Committee was set up under the National Security Acts to administer the Victorian Potato Stabilisation Plan. This Committee is not a marketing Board, but it regulates the supply of potatoes going on to the market. After submission of individual returns, growers were permitted to sell 40 per cent. of their No. 1 grade in Victoria, they being free to send the remainder to interstate markets. The maximum price was fixed at £6 per ton. As a result an additional £42,000 has been received by growers—this comprising the difference between the 37/6 per ton previously received and the £5 per ton nett received by growers for the quantities sold under the plan, plus the increase in prices of potatoes sold interstate. The supply regulated to the markets fully meets the demand, and no greater quantity could be sold, even if offered at £1 per ton.

"The only complaints from growers," states Mr. Ward, "are in regard to the size of the quota. Naturally every grower would like a larger quota, but if the Committee acceded to the request, there would be oversupply, and prices would slump as there is no minimum price fixed. One large grower

said that his only regret was that the Committee had not been in operation earlier."

At a crowded meeting at Wallace recently, unanimous approval of the plan was expressed, together with votes of thanks to Mr. Hogan (Minister of Agriculture), and his advisers.

CONTINUANCE OF ACQUISITION FORECAST.

Tasmanian Views.

The Tasmanian Minister for Agriculture (Mr. D'Alton) stated he understood the Joint Parliamentary Committee was likely to recommend the continuance of orderly marketing of next season's Apple and Pear crop. This was cause for satisfaction as the acquisition scheme had prevented Tasmanian growers from bankruptcy and from being forced to leave their holdings. The principle of acquisition schemes was sound, particularly for commodities which had built up the shipping business and the market for which had declined because of war.

He understood that the Committee would recommend improvements in some of the details, particularly with regard to marketing in Sydney. Unfortunately there were some who were deliberately attempting to prevent the scheme from operating satisfactorily. With some improvements the scheme should command the support of consumers.

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Meeting at Tyabb (Vic.) —

On September 26, at the Tyabb Hall, a meeting was held to protest against Marketing Boards of all kinds. Speakers included Mrs. Serpell, Messrs. V. A. H. Clark, H. S. Tainton, T. H. Barclay, and A. J. Noble, who condemned the Apple and Pear Acquisition plan. Mr. Noble produced letters from several Brisbane agents, stating they hoped Victorian orchardists would unite and abolish this scheme as it had disorganised their trading.

Mr. Kirton, M.L.A., agreed to place several requests before the Minister for Agriculture. A vote of appreciation to Mr. W. H. Everard, M.L.A., was carried.

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Other reports from the Mornington Peninsula state that a majority of the growers favor a continuance of the acquisition plan.

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Apple and Pear Acquisition — (Continued)

Destructive Tactics Deplored.

A correspondent writes:—"While the report of the Joint Parliamentary Committee on Apple and Pear Acquisition is pending, evidence is not lacking that a majority of Australian growers desire a control system as a war emergency measure. Constructive criticism is helpful to bring about improvements, but the action of certain disgruntled middlemen designed to destroy the scheme merits condemnation. Some growers who gave critical evidence before the Parliamentary Committee have been furnished by those disgruntled interests with questions for Mr. Anthony and the Prime Minister. The questions drafted for Mr. Anthony are particularly offensive. If Mr. Anthony gets several letters containing suggestions of self-interest he will know that they emanated from one source. Those who seek to inspire these letters must have a low opinion of the intelligence of growers.

"There are growers who honestly object to the acquisition plan and these have voiced their opinions vigorously, giving their reasons, but in no instance have unworthy motives been imputed to a Minister of the Crown.

In the picturesque words of 'Blithering Blazes' Billy Hughes, there are some people who have 'the mind of a toad in a cess-pool.'

"The questions which growers are asked to send to the Prime Minister suggest that the acquisition plan was drawn up by some self-seeking men who wanted 'sweet jobs' and who told the Government 'a hard-luck story about poor orchardists suffering because of the lack of export shipping space.' In the correspondence, names of highly respected men are bandied about and a particular district in N.S.W. is mentioned—a district supposed to oppose acquisition but which contains many prominent growers who believe the acquisition plan to be necessary to preserve the industry. Is it a fact that the lack of export shipping space was the prime cause of the acquisition plan or is it not?

"Growers who have been through gluts in the past because of the excess of even a few hundred thousand cases do not want to witness a glut on a gigantic and unmanageable scale—a glut which would not only ruin the Apple and Pear growers but which would crash the market for other types of fruit."

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THE ORCHARD



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As your nearest international Harvester Agent to tell you more about Farmall A and the GL-9A tractor disc harrow, or write to us for a catalogue:

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CANADIAN APPLE INDUSTRY

Control Measures Adopted as War Emergency.

Large Quantities Used as By-Products.

Development of Apple Juice Trade.

Increase of Consumption by Means of Advertising.

THE CANADIAN commercial Apple crop in 1940 aggregated 12,304,000 bushels, as compared with the heavy crop of 16,429,000 bushels in 1939, a decrease of 25 per cent, states the Canadian Department of Agriculture. The quantities produced for the three preceding years (in bushels) were:—1936, (12,063,000), 1937 (15,172,000), 1938 (16,429,000).

Sale to Processors: Larger quantities of fresh Apples have been processed in Canada from the 1939 and 1940 crops than in any previous year. The curtailment of fresh exports has necessitated diversion to processing plants, but the demand for processed Apples in various forms, notably as juice, is established and will no doubt maintain a permanent place in the industry in future.

Prior to 1939, Apples were processed mostly as canned and evaporated, and the quantity manufactured depended largely upon the condition of fresh markets at home and abroad and the quality of the crop.

The introduction of Apple juice, sauce, chips and various other products has met with favorable response, and a proportion of future crops will no doubt be regularly devoted to the production of the more popular by-products, the demand for which was created during war years.

Fresh Apples sold to processors in the past five years (in bushels) were (1936), 2,261,820; (1937), 2,586,957; (1938), 1,463,287; (1939), 5,641,408; (1940), 3,848,791.

The large increase in 1939 and 1940 will be noted. Here are more details regarding the factory uses of Apples in the last two years:—

| | 1939. | 1940. |
|-------------------------------------|-----------|-----------|
| | Bushels. | Bushels. |
| Canned | 1,963,000 | 1,185,000 |
| Dehydrated .. | 2,460,000 | 1,268,000 |
| Concentrated juice (for export) . . | — | 187,000 |
| Cider | 548,000 | 58,000 |
| Vinegar | 325,000 | 178,000 |
| Canned Juice . . | 159,000 | 640,000 |
| Sauce | 24,000 | 169,000 |
| Pie Fill | 74,000 | 56,000 |
| Others | 87,000 | 107,000 |
| Total | 5,640,000 | 3,848,000 |

Following is a summary of the distribution of the crops during the past five years:—

| Season. | Commercial Production. (Bus.) | Fresh Exports. (Bus.) | Processed. (Bus.) | Domestic Fresh Consumption. (Bus.) | Per Capita. (Lbs.) |
|------------|-------------------------------|-----------------------|-------------------|------------------------------------|--------------------|
| 1935-36 .. | 13,517,700 | 6,703,029 | 1,385,950 | 5,428,721 | 24.822 |
| 1936-37 .. | 12,062,700 | 4,518,606 | 2,261,820 | 5,282,274 | 23.949 |
| 1937-38 .. | 15,171,900 | 6,723,675 | 2,586,957 | 5,861,268 | 26.355 |
| 1938-39 .. | 15,667,200 | 8,463,246 | 1,463,287 | 5,740,667 | 25.607 |
| 1939-40 .. | 16,428,900 | 4,020,621 | 5,641,408 | 6,766,871 | 29.895 |
| 1940-41 .. | 12,303,900 | 1,056,842 | 3,848,791 | 7,398,267 | 32.886 |

*Preliminary.

Converted at the rate of 3 bushels per barrel, 50 pounds per bushel.

While the foregoing table indicates the quantity of raw whole Apples purchased by processors for the manufacture of the products indicated, it should be pointed out that quantities of such products as cider, pomace, etc., were also manufactured from skins and cores.

Per Capita Consumption.

Fresh Apple consumption in Canada has shown an increase during the past two seasons. The increased quantity available for home markets, due to restriction of exports, together with advertising, has resulted in a greater response from the consuming public.

The 1940 crop was about 4 million bushels lighter than in 1939, but exports declined about 3 million and processors took about 1.8 million bushels fewer Apples, so that the quantity available for domestic consumption was larger than the previous year by about 600,000 bushels. This represents only fresh Apples and does not take into consideration the sharp increase in the consumption of Apple juice or any other by-product. Some 640,000 bushels of Apples were used in the manufacture of juice alone from the 1940 crop, all of which is consumed on domestic markets.

The Canadian Apple industry is being operated on a national control basis as a war emergency.

NO APPLES FROM CANADA.

Department Says Report Absurd.

Commenting on recent statements that Apples were to be imported from Canada, while "Australian Apples were fed to cattle," officials of the Commerce Department said some absurd remarks had been made. They stated there was a quarantine embargo on the importation of Canadian Apples because of Fire Blight. In any case consumers would have to pay 24/- per case for Canadian Apples, while a million cases of Australian Apples were in cold storage at the time of the report.

Citrus in Palestine

Soil and Climate Suitable But Cultural Conditions Primitive

Interesting Review by S. Australian Soldier-Grower

I NTERESTING INFORMATION relative to the citrus industry of Palestine is contained in a letter from Capt. Jack Price, of Renmark, S. Aust., and reviewed at length by "Nemo" in the "Murray Pioneer."

Capt. Price gives the following summary:—

"1. Huge tracks of country in Palestine are perfectly suited to citrus growing.

"2. The climate is also perfectly suited for the purpose.

"3. Ample quantities of water can be obtained from sub-artesian basins.

"4. From a geographical point Palestine is ideally situated for the supplying of her products to a tremendous population within a reasonably short radius from the groves.

Now Come a Few "Buts."

"1. The cost of virgin country is somewhere in the vicinity of £50 sterling per acre.

"2. The citrus groves have been planted with trees only 12 ft. x 12 ft. apart, and some as close as 10 x 12, and there is no need for me to point out what will be the ultimate result of this foolish practice. Palestine is even now, at this early stage of development, paying the price of close planting. I have seen groves 15 years old, completely burned out because of this.

"3. Red Scale is rampant. Apparently nothing is done about it. The philosophy of the East is this, 'Allah has brought this pest, so will Allah again take it away.' The result of this is that I have seen the finest specimens of Red Scale you could find in a year's march.

"4. Cultivation is, in the main, still in a very primitive stage, the same old plough being used as was used by these people 2,000 years ago.

"5. Irrigation from the wells is guided around the butts of the trees, and sometimes these trees have as many as two or three main butts; there seems to be little attempt to form the tree into some semblance of shape.

"6. Cover crops are practically unknown, except in a few isolated cases where Jews have adopted more advanced methods of culture.

"7. Artificial manuring is practically unknown in this country.

"8. Marketing conditions are chaotic and nothing has been attempted to bring about any kind of organised State control.

"The Arab is by nature essentially a nomad—a gatherer of things provided by nature, and it seems hard to instil into him the necessity of helping nature.

So you see, the citrus industry in Palestine has some very healthy headaches ahead of it before it gets rid of its 'growing pains,' and also provided that the child lives through the war. If it does and the growers adopt modern methods, then, and then only will it become a power in the citrus growing countries of the world.

"The fruit grown, Improved Valencias and Grapefruit, is superior to anything I have seen on the River Murray."

Citrus From Palestine Exported to Australia.

Citrus growing in Palestine has undergone an extensive development in the past 20 years. For the 12 months ending on May 31, 1940, over 7,000,000 cases were exported, which included six and a half million cases of Oranges of all varieties, and one million cases Grapefruit. Of this quantity the U.K. took more than 5,000,000 cases and the rest was exported to countries now in enemy hands. About 19,000 cases were exported to Australia, comprising 14,454 cases of Grapefruit and 2,370 cases of Lemons. The importation of citrus fruits into Australia has caused some criticism, but this must be considered in the light of reciprocal trade between the two countries. The value of citrus fruits imported into Australia from Palestine amounted to £67,000, whereas the exports from this country and New Zealand to Palestine amounted to £178,000.

Unthrifty Trees.

Comment is continued by "Nemo" on statements in California re the diminution of unthrifty trees and "marginal producers" in citrus groves.

The same thing applies to Australia. There are many "off type" trees in the Murray Valley and elsewhere.

Hints on Manuring.

By and large the subject of manuring can be outlined in a very few words. Use superphosphate with cover crops at the rate of 2 or 3 cwt. per acre, and apply a nitrogenous fertilizer in the Spring before bud burst at the rate of from 1 to 2 cwt. per acre. No increase in crop has yet been noted in the use of superphosphate in the experiments made by the C.S.I.R., to the use of super. can be confined to stimulating the growth of cover crops.

If we could get enough stable manure to put on from 10 to 20 tons per acre we would not need either super. or sulphate of ammonia, nor need we then plant cover crops. Animal manures contain all the necessary plant food. Potash does not appear to be necessary in this district.—(Renmark, S.A.)

PRUNING OF CITRUS TREES.

A Springtime Operation.

T O BALANCE THE LOSS of many roots at planting, Orange, Lemon and Mandarin trees need a reduction of their top growth. Orange trees may be cut to a straight stem or well-formed head at from 20 to 30 inches from the ground; Mandarins of most varieties may be headed at from 18 to 20 inches, and Lemon trees at from 20 to 24 inches. As a general rule, Orange and Grapefruit trees develop a pendulous habit of growth; consequently such trees should be headed higher than Lemons or Mandarin trees.

Many growths will quickly develop on such stems, but only those which emanate from the top 6 or 8 inches should be retained, the lower shoots being cut clean off or rubbed soon after development.

In the case of Oranges and Mandarins little further attention is necessary except where vigorous upright growth appear in the centre of the tree. As a rule, these should be cut cleanly out as soon as noticed. They are likely to reappear, and, if permitted to remain, will spoil the roundish shape desired in the mature tree, and have a tendency to rob, which should be prevented.

The only other pruning which is desirable is the removal of any limbs which are touching the ground to a height to give a few inches of clearance, and the removal of dead wood.

Any pruning that may be necessary is best performed in Springtime, though removal of dead and spent wood may be done whenever opportunity occurs.

As Orange trees bear on wood produced the previous season, it will be obvious that satisfactory production is impossible from trees making little new growth. The time comes when every grower must determine whether his trees are making sufficient new growth for subsequent cropping, and if they are not,

what should be done to ensure such growth.

Growth may be promoted by the application of a suitable type of fertilizer, but it may be more economical to bring about response by means of pruning.

Some thinning out and shortening back of limbs may, therefore, be advisable.

In the case of Mandarins, particularly of Emperor variety, pruning should be directed towards spreading the branches to counteract the upright habit of growth. In the course of time a very heavy bearing in alternate years may be observed. A light thinning of the fruiting twigs will minimise such a tendency, whilst a heavier thinning of the limbs is desirable on very mature trees growing in a shallow soil. Such prunings are not required annually, but only when it is anticipated that excessive cropping may otherwise prove improvident.

Lemon trees are rarely pruned after being headed at planting, but regular and frequent attention to pruning would result in trees being much better formed and made capable of carrying the heavy crops that frequently break them down when self-formed.

Pruning, nevertheless, is one of the least important operations in citrus production, once the trees are established, and if trees are growing poorly it is likely to be harmful, resulting only in further weakening and retarding of growth. A satisfactory response to pruning is only obtainable if the trees are amply fertilized and soil conditions are favorable.—"N.S.W. Weekly Agricultural Notes."

CITRUS TREES.

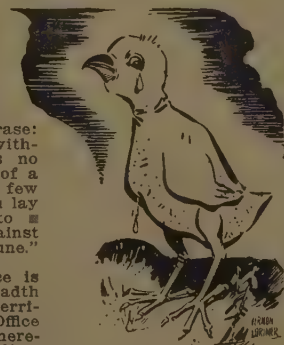
Manganese Treatment for Chlorotic Condition.

The elimination of chlorotic condition of citrus trees among the older groves of the Torrens Valley, South Australia, is the object of extensive tests which will be conducted during the coming Spring, states Mr. N. R. Quinn, Asst. Horticultural Adviser, S. Aust. Dept. of Agriculture.

NOT A FEATHER TO FLY WITH

There is tragedy behind this flippant phrase: The man without money (like the bird without feathers) is earthbound. There is no greater handicap in the world than lack of a financial reserve. By depositing even a few shillings a week in a Savings Account you lay a foundation which steadily grows into a powerful structure... a sure safeguard against "the slings and arrows of outrageous fortune." Open your account next payday. The Commonwealth Savings Bank service is extended throughout the length and breadth of Australia, and even into the Mandated Territories, by means of Branches and Post Office Agencies. Savings Bank facilities are therefore available to you, wherever you may live.

COMMONWEALTH SAVINGS BANK OF AUSTRALIA



The man without money (like the bird without feathers) is earthbound.

In September last year trials with the standard zinc spray treatment for mottle-leaf produced no results.

In January this year a 2 per cent. solution of commercial manganese sulphate with calcium caseinate spreader at the rate of $\frac{1}{2}$ lb. in 100 gall. water caused a disappearance of chlorotic symptoms.

Further tests are proceeding with commercial manganese sulphate and chemically pure manganese sulphate to eliminate the unknown factor of impurities in the former and to definitely establish that a deficiency of manganese is the cause of the disease.

ORANGES IN N.S.W.

Commons Used for Juice Extraction.

The Director of Marketing stated recently that the bulk of Common Oranges marketed in N.S.W. this season had gone

into the hands of the factories for juice extraction.

Mandarins have proved difficult to sell because of the small size of the fruit, while Lemons are in poor demand, although the crop is good.

Most of the Navel crop has been marketed. Although there are some good Valencia crops, there are many moderate to light—the dry season appears to be affecting their development.

AMERICAN WALNUTS.

The Annual Report of the California Walnut Growers' Association discloses a considerably smaller crop for 1940 than the heavy 1939 crop, this decline being mainly due to the results of the severe weather experienced during September, 1939. The 1940 production reached 91,645,630 pounds, California contributing 83,645,630 pounds and Oregon providing the remainder.



YOU MAY RELAX

When a man gets to be 65 he ought to be able to take things more easily; at any rate to relax a little.

Whether he can or not will depend, largely, upon the age at which he decided that that was what he wanted to do.

When George Binstead O'Reilly was 25 years of age in 1902 he met an A.M.P. representative, who suggested something of this sort to him. He was then earning £8 a week. He decided that he would invest 25/- a week in a policy that would give him £2,500, plus bonuses, when he was 65.

He reached 65 the other day, and the A.M.P. Society had the pleasure of giving him a cheque for £5195, which was the £2500 agreed upon, plus £2695 of bonuses.

And there is this to be noted: had Mr. O'Reilly died before he reached 65, his widow would have received the £2500, plus whatever bonuses had accrued to the date of his death.

What about you, Sir, planning a similar aid to relaxation? You need not, of course, invest as much as 25/- a week. You can invest as little as you like, or as much as you like. Ask the nearest A.M.P. office to send a man to talk over s Plan with you; or, if you prefer, write and say: Tell me the story of "How to Relax."

A.M.P. SOCIETY

The Largest Mutual Life Office in the Empire.
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Head Office: 87 Pitt Street, Sydney.

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New Zealand Office: Customhouse Quay, Wellington.

Apple Advertising in U.S.A.

Washington State Alone Spends £35,000 Annually on Publicity.

Newspapers, Radio, and Hoardings Used, also Scientific Books for Doctors and Nurses.

Two Moving Pictures Made.

Advertising campaigns to increase the consumption of Apples are conducted by organisations representing growers in different States. The State of Washington, on the Pacific North-West Coast, has been particularly active. An Apple Advertising Commission has been set up, the manager of which is Mr. C. E. Chase, at Wenatchee.

The 1941-42 advertising campaign will specialise in newspaper advertising to reach the public. Advertisements are also placed in fruit trade newspapers. Posters on hoardings are used extensively. This is reinforced by the "dealer" service, i.e., visits of travellers to green-grocers' shops and the supplying of shop display material, recipe books, etc.

During the past five years, the Washington State Apple Advertising Commission has spent an average of £35,000 annually.

A special feature is made in reaching the medical profession through advertising in the Medical Association Journal, taking the Apple health message to 94,000 doctors.

Special literature about the health value of Apples has also been used extensively, the main one being a "Digest of Scientific Literature," containing 96 pages and going to 12,000 doctors, nurses, dietitians, educators and nutritional research studies.

Two motion pictures, one put out a year ago and an improved one released this season, have been shown to a recorded audience of well over 100,000 people, and from February to June, 1941, 40,464 people saw the new consumer film, "Washington, First in Apples."

They have circulated 3,000,000 die-cut match books, and other Apple literature, and have made four surveys both concerning the consumer and the retailers to help in Apple consumption.

In special sales for which the dealer service men were responsible, records show an 86 per cent. average increase in Apple sales over comparable periods when drives were on.

Also during the five years the Commission sponsored 7,316 radio announcements of many different types. In radio programmes seasonal varieties are stressed and housewives are told about home refrigeration to keep Apples in good condition.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
HEATY HOUSE, 499 LITTLE COLLINS ST. MELBOURNE.

International Apple Association

U.S. Government Purchased 8½ Million Bushels of Apples in 1940-41 Season.

Elimination of Low Grade Apples Recommended.

THERE WAS A LARGE ATTENDANCE from various parts of the world at the Annual Conference of the International Apple Association held at Toronto in August. The Secretary, Mr. R. G. Phillips presented a comprehensive report dealing with National Apple Week, production areas, national defence and price fixing, and the elimination from marketing of low-grade fruit.

During the 1940-41 season the United States Government, through the Surplus Marketing Administration and the Stamp Relief plan purchased 8,531,974 bushels of Apples at a cost of £2,084,600.

During the 1940-41 season the Government purchased for relief distribution 1,101,986 bush. of Pears at a cost of £375,200, plus 396,943 boxes at a cost of £29,683 subsidy for export and domestic diversion markets—a total of £404,883.

The purchases of Apples and Pears with Government funds for relief distribution, etc., were deemed necessary to save the Apple and Pear growers from financial bankruptcy.

"Eliminate Low Grade Apples."

Continuing, Mr. Phillips stated that it was certain that neither U.S.A. nor Canada could sell through trade channels or could market to the advantage of the producer all the Apples grown—good, bad and indifferent. It was time the industry learnt this lesson. Even the vast quantities purchased for relief distribution failed to solve the problem. "I still maintain," said Mr. Phillips, "that there is too much poor quality fruit marketed and too much poor stuff goes into storage. Grading laws should be enforced to eliminate this inferior fruit."

It was decided to hold "National Apple Week" from October 24 to 31 inclusive.—(This corresponds with April in Australia.)

APPLE JUICE IN U.S.A.

Growers Organise a Co-operative Company.

A Fruitgrowers' Co-operative Company has been organised in Virginia, U.S.A., to manufacture Apple juice. They aim to produce 150,000 cases of both 24 18-oz. and 12 48-oz. cans. Experimental work in blending juices of various varieties of Apples has been conducted for more than a year, with the result that a juice of delightful flavor, body and color has been developed. — "New York Pack-er."



South Australian News and Notes



Official Reports and Notes of the South Australian Fruitgrowers' and Market Gardeners' Association

S.A. Fruitgrowers' and Market Gardeners' Association Incorp.

40th Annual Meeting.

The 40th annual general meeting of the above Association was held in the Board Room, 288a Rundle-street, Adelaide, on Friday, September 26, 1941, at 11 a.m.

The President, Mr. H. N. Wicks, presided and the following members and delegates were present: Messrs. C. J. Pitt, W. Wye, R. A. Cramond, R. B. Pritchard, A. E. Brealey, L. H. Moulds, J. D. Yeatman, H. B. Robson, W. H. Ind, H. E. Pitt, G. L. Pethick, C. H. Ragless, W. J. Bishop, L. B. Pfeiffer, L. J. Wicks, A. O. Petersen, H. N. Western, G. Jennings, O. Essalbach, I. Popov, D. W. Hannaford, M. J. Vickers, J. Turner, and J. B. Randell.

Apologies received from F. A. Wicks, M. Packer, C. Stanford, G. H. Schultz, N. T. Hobbs, M. Hannaford, A. G. Strickland and Hon. T. Playford.

Minutes of the 39th Annual General Meeting read and confirmed.

Chairman: Mr. H. N. Wicks gave a resume of the operations of the Association over the past 12 months, and voiced his appreciation of the co-operation he had received from the Executive Committee, the Vice-President, Mr. A. G. Strickland (Chief Horticulturist) and the office staff.

Financial Statement: The Secretary reviewed the financial position of the Association, and presented the audited statement of receipts and payments. This statement showed the finances to be in a healthier state than at any time during the existence of the Association.

Mr. H. N. Wicks, supported by Mr. C. J. Pitt, moved the adoption of the report and financial statement. The motion was carried.

Election of Officers: As required by the constitution, all offices become vacant at the annual meeting, and it was necessary for the meeting to appoint a President, Vice-President, 10 Committeemen, and an Auditor.

The following were elected:—**Patron,** Hon. T. Playford; **President,** Mr. C. J. Pitt; **Vice-President,** Mr. R. A. Cramond; **Im-**

mediate Past President, Mr. H. N. Wicks; **Executive Committee,** Messrs. L. J. Wicks, J. Turner, W. J. Bishop, W. H. Ind, J. Turner, A. O. Petersen, H. B. Robson, J. B. Randell, R. Hunter, H. N. Western; **Auditor,** Mr. S. R. Hosking; Association representatives on Committee of Management of Fruitgrowers' and Market Gardeners' Society Ltd., Messrs. J. Turner and A. Elliott.

Retiring President: Mr. W. J. Bishop and Mr. R. Cramond moved a vote of thanks to the retiring President (Mr. H. N. Wicks) for services so efficiently and generously rendered the Association and the industry during the past two years.

The motion was supported by several speakers and carried with acclamation.

Sectional Branch Reports: Resumes of the year's activities were received from the Celery, Tomato, Potato, Cherry, Soft Fruits, Apple and Pear and Citrus Sections, and the Onkaparinga and Marion Branches. Each, considering the circumstances, reported satisfactory progress.

The Fruitgrowers' and Market Gardeners' Society Ltd., reported an alltime trading record.

Thanks: The meeting concluded with Mr. H. E. Pitt expressing the appreciation of members for the untiring efforts of the Executive Committee over the past twelve months.

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A. STUART, Secretary,
F. & M.G. Society Ltd.

FRUIT GROWERS' AND MARKET GARDENERS' SOCIETY LTD.

The seventh annual general meeting of shareholders of the above Society was held in the Board Room, 288a Rundle-street, Adelaide, on Friday, September 26, 1941.

The Chairman (Mr. W. J. Bishop) occupied the chair, and expressed his disappointment at the small attendance of shareholders.

Minutes of 6th Annual General Meeting of shareholders were read and confirmed.

The Chairman and Manager (Mr. L. E. Cowley) both reviewed the operations of the Society over the past year, and stated that the turnover figures and trading result constituted an all-time record. Sales had increased by 25 per cent., and with the rapid progress being made, increased capital was necessary for the progress to be efficiently maintained.

Balance Sheet: The Secretary submitted the financial accounts and balance sheet, which was very favorably received.

Surplus: On the motion of Messrs. L. J. Wicks and R. A. Cramond, it was unanimously carried that the members be levied to the full extent of the surplus as a charge to increase the reserves of the Society.

Committee Vacancies: Messrs. A. R. Martin and N. T. Hobbs, who retired by effluxion of time from the Committee of Management, were re-elected unopposed.

Messrs. A. Elliott and J. Turner were re-elected as representatives of the S.A. Fruitgrowers' and Market Gardeners' Assoc. Inc. on the Committee of Management.

Auditors: Messrs. Annells, Powell, Tilley, Wiltshire and Co., were reappointed as Auditors.

Capital: Resolved that the subscribed capital be fully called up.

S.A. FRUITGROWERS' AND MARKET GARDENERS' ASSOCIATION.

Executive Meeting.

The Executive Committee of the above Association met in the Board Room, 288a Rundle-street, Adelaide, on Friday, September 26, 1941, at 10 a.m.

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Beaten by "Bayers"
"FOLOSAN"

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The President (Mr. H. N. Wicks) presided over the meeting, which was attended by the following:—Messrs. C. J. Pitt, L. B. Pfeiffer, L. J. Wicks, O. Essalbach, L. G. Pethick, J. B. Randell, A. O. Petersen, M. J. Vickers, R. A. Cramond, H. B. Robson, J. D. Yeatman, C. H. Ragless, J. Turner, D. W. Hannaford, A. E. Brealey and W. Wye.

Apologies Received From: Messrs. M. Packer, C. Stanford, N. T. Hobbs, G. H. Schultz, R. B. Pritchard, F. A. Wicks and A. G. Strickland.

Minutes read and confirmed.

Correspondence: The following correspondence was received and dealt with: 1. Department of Agriculture, stating its inability to accede to the Association's request for the retention of Mr. R. Fowler's services as manager of the Blackwood Orchard. (Mr. Fowler retired from the position during last month.)

2. Letter from the Deputy Federal Commissioner of Taxation, stating that Primary Producers could not be exempted from the Pay Roll Tax.

3. The Orchardists and Fruit Cool Stores' Assn., of Victoria, seeking information as to cool storage matters in connection with Apple and Pear Acquisition.

4. Women's War Service Council re the using of female labor in orchards.

Cool Storage: Resolved, the letter from the Orchardists and Fruit Cool Stores of Victoria be placed before the Apple and Pear Section for consideration.

Women's War Service Council: Resolved that the letter be acknowledged, and a copy of same be forwarded to each member of the Association, and each fruit packing house.

THE SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION INC.

October Meetings.

The October meetings of the Association will be held at the Secretary's Office, 83-4 Brookman Buildings, Grenfell-street, Adelaide, on Friday, October 31, 1941.

Growers' Sub-Committee commencing at 1.45 p.m.

Executive Committee Meeting will commence at 2.45 p.m.

E. WHITFIELD MILLS,
Secretary.

DONATION TO RED CROSS BY TOMATO GROWERS.

On Tuesday afternoon, September 23, 1941, the Chairman of the Tomato Section of the S.A. Fruitgrowers' and Market Gardeners' Assoc. Inc. (Mr. C. Stanford), and Mr. A. Stuart, Secretary of the Association, visited Red Cross Society Headquarters, Gawler Place, Adelaide, for the purpose of handing to the Society a cheque for £302/1/6.

The amount stated was raised by voluntary contributions from a percentage of glasshouse Tomato growers in the above-mentioned Association. Included in the list of contributories were growers of Bulgarian and Italian nationality.

In presenting the cheque to Mr. W. H. Shephard, Chairman of the Red Cross Society in South Australia, Mr. Stanford said that the amount raised had fallen short of the objective of the Committee, but growers who had contributed had given liberally.

In accepting the cheque, Mr. Shephard said: "I would ask you to accept and convey to every member of your Association who contributed to this splendid sum the grateful thanks of the Executive Committee for their generosity and public spirit. It is impossible to foresee the needs of the members of our fighting forces who may become casualties either by way of wounds, sickness, or as prisoners of war, and it is essential that the Society shall always have at its command sufficient funds to meet immediately any and every call which they may make on their fellow Australians."

SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

The monthly meeting of the Executive of the South Australian Fruit Marketing Association was held at Adelaide on September 26.

There were present: Messrs. J. B. Randell (President), R. E. Pritchard, S. M. James, W. W. Miller, R. G. Hannaford, A. O.

Petersen, R. H. A. Lewis, P. R. B. Searcy, D. W. Hannaford, F. F. Redden, M. J. Vickers, L. J. Bishop, and E. W. Mills (Secretary).

Mr. R. Fowler's Services.

The Department of Agriculture wrote stating that the Classification Board could not recommend the extension of Mr. R. Fowler's services as manager of the Blackwood Orchard.

Mr. Fowler wrote expressing appreciation in being elected a life member of the Association.

"Rowing In" of Apples: The S.A. State Acquisition Committee wrote in reply to the Association's letter re "rowing in" of fruit. In regard to this matter it was pointed out that the minute passed on August 29 should have read "To ask the Committee to discourage the 'rowing in' of fruit voluntarily packed by some sheds."

Crop Prospects: It was generally agreed that while certain varieties are showing satisfactorily at the moment there was every reason to anticipate a light crop for the coming season.

Fruit in Cold Store: The Secretary was instructed to ask the Department of Agriculture for the figures setting out the quantity of fruit held in cold store at the end of each month from December, 1939, onwards, to enable the records commenced by the Marketing Sub-Committee to be brought up to date for future reference.

GROWERS' SUB-COMMITTEE.

There was a satisfactory attendance at the meeting of the Growers' Sub-Committee of the South Australian Fruit Marketing Association held at Adelaide on September 26. Mr. S. M. James presided.

Pears Not Setting: Mr. R. B. Pritchard initiated a discussion on the subject "Causes of Pears Not Setting." He stated that a discussion would be of more value than a set address. He had also arranged, through the courtesy of Mr. A. G. Strickland, for Mr. J. A. Beare to attend and give some information in regard to experiments carried out in Victoria by Mr. Strickland. Interesting details of experimental work were given by Mr. Beare, and Mr. Pritchard stated that it was very difficult to explain the causes of Pears not setting, and a general discussion took place as to whether Pears are self-pollenising and the effect of cross-pollination.

Members gave instances where isolated blocks of Pear trees crop quite satisfactorily. The general opinion was the vitality of the trees was a big factor.

Subject to the approval of Mr. A. G. Strickland, Chief Horticulturist, it was decided to ask Mr. J. A. Beare to give a paper at the October meeting dealing with some of the experiments being carried out by the Department of Agriculture.

Visit to New Zealand

Control System Operating for Fruit and Vegetables.

INTERESTING COMMENTS regarding developments in New Zealand are contained in a letter received from Mr. H. G. Harvey, who, in company with Mr. D. Harvey (Agricultural Implement Manufacturers), recently visited the Dominion. Extracts from the letter are as follows:—

"We installed a large Lemon processing plant for the Internal Marketing Division of the N.Z. Government. Incidentally, the Internal Marketing Division functions somewhat similarly to the Australian Apple and Pear Board, except that the scope is wider and they control the marketing of all fruits and vegetables inside the Dominion.

The citrus processing plant which we installed is housed in a large new building in Auckland, which is to be the distributing centre for Lemons, Apples, honey, butter, etc. They have several cool store chambers.

The Lemon processing plant is the second machine installed by Daniel Harvey Ltd. in N.Z. in the past 18 months, the first being installed at Tauranga, a large Lemon growing centre in the Bay of Plenty in the North Island.

Lemons in N.Z.

The main difficulty in growing Lemons in N.Z. is the fact that owing to the semi-tropical conditions and large rainfall, the humidity is very high, and the fruit tends to go mouldy within the first few days after picking; now, since installing the new processing equipment the loss of fruit has been cut to a minimum and where it was necessary to import Lemons before to keep the market up, this is now unnecessary.

We visited Napier which is situated on the coast of Hawkes Bay. This area is the scene of the earthquake several years ago, and on the site of the old town a completely new city now stands.

Hastings is in the centre of a large fruit growing area where Apples and Pears grow prolifically, also Peaches and Apricots.

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There is a very large new cool store being constructed at Hastings by the Internal Marketing Division, and it is interesting, especially for Victorians, to note that it was designed by our friend, Mr. Alf. Powell, who was for many years connected with the Blackburn Cool Store.

Fruit and Vegetable Cannery.

A growing industry in this area is Wattie's Cannery Ltd., which started in a small way a few years ago and is going ahead very fast, canning all types of fruits and vegetables grown in the district.

Developments at Nelson.

At Nelson (in the north of the South Island) we met Mr. Geo. Higgs, orchardist, philosopher, and super Apple salesman, who is well known in fruit marketing circles both in Australia and England. The most striking thing that I observed in Nelson district was the fact that they could produce prolifically many different types of produce—Apples, Pears, Peaches, Apricots, small fruits, rock and water melons, tobacco, hops, butter and cheese.

Apple Control System.

The Apple growers under the Internal Marketing Scheme in N.Z. receive the following prices for their fruit: 5/9 per case Extra Fancy; 5/6 per case Fancy; 4/6 per case Commercial. Out of this they have to grade, size, supply cases and all packing requirements.

All Apples are packed in Canadian export cases made from locally grown Pinus Insignis.

The Pinus Insignis plantations throughout New Zealand are a fine spectacle and as far as I could ascertain there are over half a million acres planted throughout the Dominion.

First Sow: Is it true that your home life is unhappy?

Second Sow: Yes, my husband is such a boar.

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Tasmanian News and Notes

APPLES AND PEARS SHOWING FOR FULL CROP — PROBLEMS WITH CASE MATERIAL AND MANURES — THE DRYING AND CANNING OF APPLES — SPRAYING HINTS.

(By Our Correspondent.)

DURING THE PAST MONTH dry conditions have prevailed in the Tamar Valley, and many orchards are so dry that ploughing is difficult, pruning has been considerably delayed (in many instances by shortage of labor), and now the spraying season is here again.

Taking it all round the trees are shaping well for a crop provided there is sufficient rain to promote growth. Many orchards have a heavy showing of blossoms, both Apples and Pears.

The case material question is even more acute in the northern districts than it is in the south of the State, and it's bad enough there. Annoyance is frequently expressed at the delay in making final payments on last season's fruit and at indecision or delay by the Government in announcing its intentions for the disposal of the 1942 crop.

In the southern districts there has been sufficient rain to date to allow ploughing to proceed where necessary. Pruning is by no means finished in several orchards, as the labor question is getting more acute.

In most cases the Pear trees have received two sprays and the Apples are getting the green tip Bordeaux; many growers are including arsenate of lead with this spray to combat Looper Caterpillar, which, it seems, begins operations about this time. The trees in most localities are later in blossoming than usual, but are coming on rapidly now as September has been much warmer than usual.

Most varieties of Pears are blossoming well and nearly all varieties of Apples have plenty blossom for a full crop.

The drying factories have now closed down for the season, and many of them have processed double the usual quantity.

The canning works are continuing as long as they can get suitable fruit.

I think the entire Sturmer crop of peeling size will be processed except what was required for the market. It appears that the Sturmer is the best Apple bar none for canning.

I notice in the last issue of the "Fruit World" (September) that Mr. L. Paynter, District Supervisor, Auckland, has some very interesting hints on spraying; he recommends lime sulphur at a strength of 1:150 in the pink. Here it is often used 1:30 at this stage and 1:60 at calyx time. He also recommends Bordeaux 1½:3:50 in combination with arsenate of lead in January. Here it would run a big risk of russetting the Apples.

The scarcity and high price of manures is serious in Tasmania

for all branches of agriculture, and will have an adverse effect on the yields of most crop.

Re-working the less wanted varieties is being checked this year by shortage of labor. It is better not to start the job than slum it and get behind with other seasonal work. I notice that many of the re-worked trees have not attained their previous size and also the fruit is not as large, and many of them show signs of sickness even when no fungus disease is visible. It certainly is a severe shock to old trees.

The small-fruit areas are being worked well in most instances, as there is a general belief that the whole crop will be wanted; the difficulty will be to get it picked, and if the present petrol rationing continues, to get it carted to the factories. Supplies of tinplate are also causing some concern to the industry.

The Port Huon Co-Op. are now processing fruit juices of several varieties, and there appears to be a fair demand, but the Australian public does not appear to appreciate this class of drink to the same extent that the Americans do. Neither does cider appeal to Australians as much as beer, and yet in other countries it is very popular.

HUON GROWERS SEEK 3/- PER CASE.

The Huon Council has decided to recommend, should there be acquisition for the 1942 crop, that the varietal group system be superseded by a uniform price of 3/- per case for all varieties. The Sturmer was admittedly the best utility Apple grown, yet it was in the 2/- group last season.

A Tasmanian correspondent recommends rubbing the hands with rotten Apples to prevent burning when using caustic sprays.

Tasmanian drying factories this season processed double their usual quantity of dried Apples.

The shortage of fertilizers is causing concern in Tasmania.

Meeting of Tasmanian State Fruit Board

EARLY ANNOUNCEMENT OF 1932 ACQUISITION PLAN REQUESTED — CASE TIMBER PROBLEMS — SHORTAGE OF COOL STORE SPACE ON MAINLAND — INCREASE OF APPLE SALES IN TASMANIA — FROST RELIEF — BLACKBIRDS AND FRUIT DAMAGE.

A MEETING of the Tasmanian State Fruit Board was held in Hobart early in September, Mr. J. R. Abel presiding.

Mr. C. W. Frost, M.H.R., stated that an interim report had been furnished by the Joint Parliamentary Committee. A resolution was carried viewing with concern the delay by the Federal Government in announcing the terms and conditions of the 1942 acquisition. Mr. Frost said it was a serious matter that cool storage space on the mainland had been taken over for other products, with the result that fruit had been squeezed out. A resolution was carried requesting that payment on the balance of last year's crop be expedited.

Case Timber.

Mr. T. G. Thompson said that the case position was desperate. Growers could not order cases until they knew whether there would be another acquisition scheme. The chairman said that the serious Tasmanian position had been aggravated by mainland inquiries for supplies of case material. The shortage of labor made it difficult to get sufficient timber cut.

On the chairman's motion it was decided to approach the Minister for Agriculture, sug-

gesting the arranging of finance to enable the Apple and Pear Board to have supplies of timber cut immediately.

On the motion of Mr. R. O. Watson, it was resolved: "To reduce marketing costs this Board considers that the dressing of cases for the interstate market is unnecessary during the war."

Frost Relief.

Mr. D. E. Ryan stated that a payment of 10½d. a bushel frost relief was to be made on about 426,000 bushels of fruit in Tasmania.

Blackbirds.

It was reported that a member of the Fauna Board had objected to the killing of blackbirds from districts where no fruit was grown. The bonus on blackbirds was considered a waste of money.

The Secretary reported that 669 heads and 18 eggs had been paid for in the last three months. The bonus was nearly £17. Mr. D. E. Ryan said it was too soon to express an opinion as to the effectiveness of the bonus. He moved that the Board deny that bonus was a waste of money and request the Government to continue with the scheme.

Local Apple Sales.

Mr. L. S. Taylor stated that local sales of Apples this season had greatly exceeded those of last year. Some persons had said that the price of Apples was too high, but the present price was really an ordinary everyday price. When there was a surplus, good fruit was made available to the public very cheaply.

Last year's sales in the State amounted to 110,000 cases, while in 1941, up to the end of August, 139,000 cases had been sold.

TASMANIA.

Apples for Factories.

In order that Apples for factories may be delivered according to varieties and at the right times, the Cygnet Council favors the setting up of local Committees for arranging delivery dates.

PREPAREDNESS!

Two ladies were discussing the best way to get rid of unwelcome visitors.

Mrs. Brown: "My dear, it's quite simple. I always put on my hat and coat when I hear the door bell. Then if it's someone I didn't want to be bothered with I just say: 'What a pity! I'm just going out.'"

Mrs. Smith: "And suppose it's someone you do want to see?"

Mrs. Brown: "Oh, then I just say: 'How fortunate; I've just come in.'"

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PORT HUON FRUIT JUICES PTY. LTD.

This company was established at the beginning of 1940, and is a subsidiary of the Port Huon Fruitgrowers' Co-operative Association Limited.

The following articles are manufactured:—

a. Apple Juice and Tomato Juice in tins and bottles.

b. All Tasmanian fruits such as Raspberries, Red Currants, Blackberries, Black Currants, Cherries, Strawberries, Loganberries, etc., are crushed and worked into raw undiluted Fruit Juice and are sold to the overseas market and the mainland. The overseas market was rapidly captured as through the war Poland and Czechoslovakia, who previously supplied the bulk of these articles to the world, disappeared from the world market.

These juices are also worked into pure fruit syrups under the brand of "Huonery Liquid Fruit." These articles are first-class goods as they are a pure blend of juice and sugar only. No artificial coloring, preserva-

tives or synthetics are used for them.

This company is just commencing the concentration of all kinds of fruit juices and we hope to open quite new avenues for the utilization of the Tasmanian fruits.

It may also be added that some fruits, such as Apricots, Cherries and Blackberries are manufactured into Liqueurs and

marketed under the name "Van Diemen" liqueurs. These liqueurs are first-class quality and have an excellent appearance, and it was due to this fact, coupled with the disappearance of French and Dutch liqueurs from world markets, that our "Van Diemen" liqueurs gained such a rapid foothold overseas. Prior to the war, France and Holland were the main suppliers of liqueurs over the entire world.



Some of the products of the Port Huon Fruit Juice Co.: (1) Cherry Brandy, (2) Creme de Menthe, (3) Egg Brandy. These are for local and export trade.

APPLE SEEDLINGS.

Root Responses of Non-Infectious Hairy Root Apple Seedlings Under Different Methods of Propagation.

Propagation.

THE TERM "Non-infectious Hairy Root" is applied to the condition in Apple trees, particularly in 1-year-old seedlings, of excessive lateral rooting in the region extending from the collar to a distance several inches below the ground line.

The trials here described were made on the seedlings of a large number of North American varieties and of French Crab with (1) root cuttings from which plants were propagated directly, (2) grafts made from piece cuttings, (3) 1-year-old seedlings, (4) seed from various sources in steamed soil in the greenhouse or in non-treated soil in the field. Scions from 1-year-old seedlings were grafted to the proximal portions of their own roots, root cuttings were made from the affected portions of these same seedlings and also from regions that appeared normal. A year after planting observations showed that:—

(1) On the grafts scion rooting occurred in all cases and the symptoms on the original root piece were suppressed.

(2) On the one-year-old seedlings (layered) stem rooting occurred in nearly all cases and the symptoms on the original pieces were suppressed.

(3) On the plants grown from root cuttings which had shown symptoms on planting no stem rooting occurred and the symptoms on the original root piece were intensified. On the plants grown from root cuttings from symptomless regions of affected seedlings symptoms appeared. The American nurseryman who wants to avoid even non-infectious hairy root with its superficial likeness to crown gall or infectious hairy root should use no part of affected seedlings for the purpose.

Although it is not assumed that all clones exhibiting symptoms will cause dwarfing, it is suggested that selection from clones exhibiting the more pronounced symptoms would appear likely to furnish a source of dwarfing rootstock.—E. A. Seigler and J. J. Bowman, in "Journal of Agric. Research," U.S.A.

A MONSTER MEETING.

The village pump was out of order and circulars were issued stating there would be a monster meeting of protest.

The reporter of the local newspaper attended and his report was as follows: "A monster meeting was held at the local hall last evening. There were six monsters present."



If you can't enlist -

LEND!

Remember when HE joined up . . . when he said "Good-bye" and smiled? You're proud of him, aren't you? Make him proud of YOU! Back him up with your money, your savings, in War Loan Bonds that will buy weapons and munitions. Every Bond speeds Victory and the day "When the boys come home." You can invest as little as £10, and even that by instalments. If you have Loan Holdings now maturing, convert them into new War Loan Bonds.

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VALENCIA ORANGE CROP SATISFACTORY — INCREASED VEGETABLE CULTURE — STRAW FOR PAPER MANUFACTURE — FRUIT FOR "OUT-BACK" — OVERCOMING SULPHATE OF AMMONIA SHORTAGE.

(By Our Correspondent.)

Seasonal Conditions: Conditions remain dry, very little rain having fallen for the past few weeks. Mild conditions and absence of Spring frost are conditions conducive to good fruit setting, and as most settlers took advantage of the early water rotations, good crops are expected on most fruit varieties.

Navel Orange Season Ends: Export of Navel Oranges has ceased, and very few remain to be forwarded to market. The first of the Valencia's are now coming forward, and some consignments have been shipped to the East and New Zealand. A normal crop of Valencias is showing, and the quality is generally good.

V for Vegetables: With "V for Vegetables" one of the Murrumbidgee Irrigation Area's chief victory slogans, the drive by the Federal Government for an adequate supply of Navy Beans and other vegetables for canning, to supply Australian and other Empire troops, promises to receive the utmost support from irrigationists, who realise that the production of the large tonnages which are so urgently needed is not merely a commercial undertaking, but a patriotic duty.

The industry is being instituted as a war-time necessity, but there is every possibility that it will become a permanent one. Following the visit of Mr. John Douglass, of the Department of Supply and Development, organisation has been set afoot for signing up farmers to contract for the supply of vegetables of all varieties, with particular emphasis on Navy Beans.

A special vegetable instructor has been appointed by the Department of Agriculture to give his whole time to this work and will be stationed at Griffith.

The Minister for Agriculture recently told the Councillors of the Willimbong Shire that, in spite of troubles, Leeton and Griffith showed an air of well being. "It stands out like a beacon," he said, referring to the prosperity of the Murrumbidgee Irrigation Area compared to the remainder of inland N.S.W. at the present moment. "Despite the many problems here which have to be solved—and they will be solved—Leeton and Griffith stand alone, in his opinion, among the country towns of the State. The Minister informed his listeners that he was amazed at the strides which the settlement had made since he was last here as Minister for Agriculture in a former Government, and was particularly struck with the advancement which had taken place at the Leeton Co-Operative Cannery. "How many towns have the advantage of the operation

of a huge, successful manufactory such as that, particularly now it is working all the year round?" he asked.

Regardless of the drains which enlistments and war employment had made on population, regardless of seepage damage and town rents problems, the M.I.A. towns and the districts surrounding them displayed an air of general well being which was not found in many other places, he said.

M.I.A. to be Great Straw Supply Centre: The Murrumbidgee Irrigation Area has a great future as a supplier of straw for the manufacture of paper, declared the representative of Australian Paper Manufacturers, Mr. J. Noel Barrett, who made investigations here for that company, and last week delivered a highly interesting lecture on the subject.

Mr. Barrett said that his report to Australian Paper Manufacturers would be that no place in N.S.W. was more suitable for the gathering of large amounts of straw than this district, when he was introduced to the gathering by the local agent of the company—who instituted the commercial gathering of straw for the purpose on the M.I.A.—Mr. A. Ross Reid.

Mr. Barrett said his own interest in supplying straw for paper had been a large one of long standing. He said he used a case pick up baler on his own properties, which turns out about 18 tons a day. Nevertheless the small balers he had seen working on the area made a very good job, and costs were not appreciably higher than those of the large machine. Mr. Barrett also remarked on the heavy weight of straw gathered to the acre from Rice—30 cwt. to 2 tons—as compared to 12 to 15 cwt. of Wheat or Oaten straw. The speaker said that he was being paid £2/10/- a ton for straw, and always showed a profit of over £1 per ton.

Lake Wyangan Irrigation Extension: During his recent visit to the area, a deputation from the Griffith Progress Association waited on the Minister for Agriculture and Chairman of the Irrigation Commission and requested that something be done to open up the large tract of land in the Lake Wyangan district, estimated to approximate 12,000 acres. It was stated that this large area had been surveyed by the Commission and that nearly 18 years ago concrete channels had been laid down at a cost of some £250,000, but that these lands were never thrown open to the public. The speaker said that the channels were now filled with sand and that Mallee was growing in them. He said that there were



Main Irrigation Channel, Griffith, N.S.W.

plenty of share farmers in the area who were merely eking out an existence and would be only too pleased to take over and develop the land.

Mr. Dunn said, in reply, that it would cost money to bring the channels back into good condition. It had been originally intended to use these lands for the settlement of immigrants from overseas. It was then thought that there would be large immigration, and the scheme was to be subsidised by the British Government. The whole position, however, was now changed. There was no money from overseas and the New South Wales Government could not get much from the Loan Council. The market position had also changed. Finally, it was not good for horticulture, and further investigation would be necessary to see if it were suitable for large area purposes. Before it was made available, it must be made sure that it could be made use of economically. The Commission was not pleased that the land was idle, but it was no good to any individual settler or to the district as a whole to proceed with settlement unless it was economically sound. He could promise nothing at present, but he would give the matter further consideration. He assured the deputation that he and his fellow Commissioners were anxious to do whatever was possible and to get some return from the original investment. However, the whole keynote was economic.

M.I.A. Fruit Destroyed Because of No Cheap Transport: "There is one industry—the fruit industry—in which the Government can, and I believe will, render invaluable assistance," said Mr. A. G. Enticnap, M.L.A., when he spoke in Parliament on the need for keeping primary production costs down to the minimum possible. "Throughout the State," said the Member for Murrumbidgee, "consumers have been unable to obtain cheap supplies of fruit for their children. In my electorate, which is largely a fruit growing district, thousands of cases of fruit have been destroyed owing to the lack of cheap marketing facilities. Distribution costs are high."

"There is a scheme known as Far Western Childrens Health Scheme. It is a wonderful organisation. Fruitgrowers decided to help by making thousands of cases of fruit available

for distribution throughout the far west portion of the State. When the Leader of the Country Party, who was then Minister for Transport, was asked to provide free transport to enable the fruit to be distributed free of freight to school children, not only in the country districts, but also in the suburbs of Sydney, where parents are unable to purchase cheap fruit, the request was refused."

"Consequently, the district people had to pay the freight. The money required is still being collected in my electorate. The work is proceeding and the primary producers are paying the freight as well as supplying the fruit free of charge. Mr. Enticnap said he hoped the present Minister for Transport would give consideration to the request for free freight, and that more humane treatment would be meted out in future.

Overcoming Sulphate of Ammonia Shortage: C.S. & I.R. gives advice. The advocacy of increased use of leguminous crops for the supply of nitrogen to the soil in view of the sulphate of ammonia position is of interest to M.I.A. farmers.

Some months ago, the Department of Supply and Development drew attention to the fact that in the coming year there would be a deficiency of 42 per cent and perhaps more, in the amount of sulphate of ammonia available in Australia.

As the agricultural and horticultural industries would be adversely affected by the shortage, the position was examined by the Council for Scientific and Industrial Research. Its report draws attention to the value of fallowing as a means of supplying Australian soils with a cheap supply of nitrogen, as well as green manuring and cover cropping.

The cultivation of leguminous crops for ploughing under has never made much headway in Australia, except in the North Queensland sugar areas, and some of the Irrigation settlements, although it was a common enough practice in other countries.

The shortage of this fertilizer may, therefore, prove a blessing in disguise. Apart altogether from their manurial value, the ploughing under of green crops has proved a profitable procedure in all orchards where it has been tried, because of its ameliorative influence on all types of soil. The war is bound

to compel many economies, and the adoption of many alternatives. If the practice of green manuring is expanded some good will accrue.

The use of farmyard manure is also advocated. Unfortunately its use must be limited. It will be of interest, however, to those who can obtain supplies to learn the comparative values of the excrement of different animals. An average draught horse excretes each year 12 tons of manure including urine, valued about £12. A dairy cow excretes 12 tons worth about £9/12/-. Farmyard manure can be used on all kinds of crops with beneficial results.

Water-Logging on the Murrumbidgee Irrigation Areas

Report by C.S.I.R.

BECAUSE OF LOSSES of trees and vines on the M.I.A., a special survey was made by the Council for Scientific and Industrial Research, investigating officers being Dr. B. T. Dickson (Chief Division of Plant Industry, C.S.I.R.), and Dr. J. A. Presscott (Chief, Division of Soils, C.S.I.R.).

Their report is comprehensive, setting out the physical conditions of the areas in the 1939 period of loss, and also those of 1931, under somewhat similar conditions.

Summed up, the loss of trees and vines is deemed to be only partly due to the floods. There were other factors. Damage during 1939 with both Autumn floods and consistently wet soil conditions during that Winter; the drainage system during the Winter had to deal with six times the average quantity of excess water. On the average it appears likely that conditions similar to those of 1939 may be expected 10 or 12 times each century.



C.S. and I.R. Station at Griffith, N.S.W.

The programme of improvement of drainage works contemplated by the Commission appears to be adequate to meet the future requirements of the Areas other than under very exceptional conditions.

Officers of the Commission contemplate recommending a minimum buffer zone of five chains between Rice fields and horticultural lands.

The orchard survey has accounted for 1,198,000 fruit trees and 606,000 vines. Of the trees, 78,000 were seriously damaged by conditions prevailing during 1939. Of these, 37,000 were directly affected by flood waters.

The general level of horticultural production in the Areas cannot be considered satisfactory. The proportion of unproductive trees in the several districts of the Areas is as follows:—

| | |
|---------------------|--------|
| Navels | 18-40% |
| Apples | 28-46% |
| Prunes | 36-67% |
| Valencias | 13-32% |
| Peaches | 21-62% |
| Apricots | 31-56% |

Recent observations have indicated that there is a marked deterioration in soil structure in some areas. Efforts to overcome this and to secure more efficient use of irrigation water

are being made through the establishment of a permanent green cover in some orchards.

The recommendations include that of asking the C.S.I.R. to undertake a statistical investigation of the probable frequency of wet, also dry Winters in the M.I.A.

Settlers should be encouraged to keep themselves fully informed about the water tables on their own farms.

The problem of deterioration of soil structure calls for investigation by the Research Station. The value of permanent green cover crops in a system of orchard management is worthy of attention, and should be made the subject of detailed investigation.

It is recommended that a campaign of education about irrigation practice and the management of orchards should be organised in close association with the Irrigation Research Extension Committee.

It is recommended that the Commission give consideration to instituting a scheme for the rehabilitation of farmers on the Murrumbidgee Irrigation Areas taking into consideration the financial position of the settlers on the one hand and the technical aspects of soils and crops on the other.

New South Wales

Young Fruitgrowers' Co-operative Society.

Successful Year Reported.

Apple and Pear Acquisition Desired for the Duration of War.

The Young (N.S.W.) Fruitgrowers' Co-operative Society Ltd. held its annual meeting on August 18, and the following retiring members were re-elected: Messrs. B. Cunich, C. Johnson and D. James.

The balance sheet disclosed a very sound position, the Society again paying a 5 per cent. dividend on paid-up capital.

A general discussion took place regarding the brining of processing Cherries as an insurance against unsatisfactory marketing through ordinary channels.

Cherry forwarding figures since the Society has commenced operations show 1938 as the peak year with 160,427 cases. The 1940 total reached 74,984.

The President, Mr. J. D. A. Hunter, gave a hint that there may be considerable difficulty in obtaining future supplies of Cherry cases.

In referring to the Apple and Pear acquisition, Mr. Hunter stated that the Government had taken the logical course, and he hoped that as a result of the investigation made by the Parliamentary Committee there would be a decision to continue with the scheme for the duration of the war and a reasonable time thereafter.

Fruitgrowers' Award in N.S.W.

The 1939 Fruitgrowers' Award was applied on September 1, 1941, to all N.S.W. orchardists, with the exception of the Apple and Pear growers whose case will be considered by the Arbitration Court on October 1.

The Australian Workers' Union is seeking to bind 489 N.S.W. orchardists to the award.

SHIPWRECKED APPLES WELCOMED.

The eat-more-Apples campaign received impetus recently among the people of Coolangatta and Tweed Heads when a coastal freighter was blown on to a reef off Fingal Beach. The hatch covers burst and large quantities of cargo went overboard. The beaches for miles around were strewn with Apples and other commodities which were eagerly collected, and on this occasion, at least, practically the whole community enthusiastically followed the Apple-a-day slogan.

ARE YOU

GRUBBING?

Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features with a host of others, was **THE "MONKEY" GRUBBER**.

It gave me the power of 260 pairs of hands in a simple and compact form; the lever is short, so that I am able to stand firm-footed and get the full stroke. There are two speeds in the machine, as well as an automatic release that allows me to let off a strain, or as the machine will work in any position, it comes in for all jobs that would require a chain block. It is taken to the job on a pair of wheels like a barn truck, and is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle, and each one is fitted with hook and loop couplings, so simple and absolutely IT for effectiveness. The makers have included a sturdy snatch block with a novel method of securing to the ropes, and also a fine type of firm gripping rope shortener. The latter makes it very easy to accommodate the lengths of rope to the tree or stump being pulled, and is quickly released from the rope. The combination of so many time and labor saving features makes the "Monkey" Grubber a superior grubbing outfit.

REMEMBER FOR YOUR GRUBBING TREES ONLY

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CANNERY NOTES

CANNED FRUITS EXPORT.

The export of canned fruits to various destinations from January 1 to August 31, 1941, are quoted as follows by the Australian Canned Fruits Board:—

| Country. | Apricots. Cases. | Peaches. Cases. | Pears. Cases. | Fruit Salad. Cases. | Pine- apples. Cases. | Total. Cases. |
|---------------|---------------------|--------------------|------------------|---------------------------|----------------------------|------------------|
| U.K. | — | — | — | — | — | — |
| N.Z. | 8,292 | 17,300 | 813 | 10 | — | 26,415 |
| Canada . . . | 15,095 | 41,764 | 11,163 | 7,368 | 49,136 | 124,526 |
| East | 59,665 | 361,618 | 218,889 | 6,962 | 3,598 | 650,732 |
| Misc. | 1,222 | 5,959 | 2,725 | 107 | 62 | 10,075 |
| Total | 84,274 | 426,641 | 233,590 | 14,447 | 52,796 | 811,748 |

CANNING TOMATOES.

Tests With San Mazano Variety in N.Z.

In view of the desirable characteristics of the San Mazano variety of Tomatoes for canning purposes, another test has been made of this variety when grown under field conditions of culture at the Annesbrook orchard. The Tomatoes were planted out on a silt loam in rows 6 feet apart and 3 feet apart in the rows. Before planting the land was brought into hills by ploughing three furrows each way. Some 650 plants were planted on the hills which were manured with a mixture of 150 lb. superphosphate, 37 lb. sulphate of potash, and 50 lb. ammonium sulphate.

The Tomatoes were not staked or lateralled. The centre of the plant was cut out early in February and the ground was strawed so as to protect the fruit from contact with the soil.

Only one spray of Bordeaux was required. The season was a favorable one for Tomatoes, and a good crop was obtained.

Picking commenced on February 21 and was completed on April 2. A total of 7,810 lb. of Tomatoes was sent to the canning factory. The Tomatoes brought 1½d. per lb., or £40/13/6 for the crop. The yield per plant was 12 lb., as against 13.3 lb. in the previous season. On the acre basis the gross value of the Tomatoes would have been £150, and costs of growing the crop £74, giving a profit of £76 per acre.—Report by Cawthron (N.Z.) Institute.

APPLE-RASPBERRY JUICE—

Favorable Reception.

To provide additional outlets for the products of the American fruitgrower, successful demonstrations have been given of the blending of various fruit juices, providing beverages of delightful flavor with characters superior to a single juice.

The juices of Apples and Pears with those of the smaller fruits, such as Strawberries, Raspberries, Blackberries and Currants, have been blended, and it has been found that a blend of Apple and Raspberry juice makes a very palatable drink.

The most successful method of preparation is to freeze the Raspberries with 10 per cent. of added sugar and, when thawed, to cold press the product and extract the pomace with equal quantities of Apple juice, and pressed again. The extracted Raspberry juice is blended with Apple juice in the proportion of 75.8 per cent. Apple juice, 20.3 per cent. Raspberry juice and 3.9 per cent. added sugar. After de-aeration and pasteurizing at 170 deg. F. under vacuum, the product is put up in attractive 20 oz. containers.

From the favorable reception given, the Apple-Raspberry juice it seems that the product should meet the real need for the additional outlets for these fruits.

NEW CALIFORNIAN PEACH.

A new semi-freestone Peach is reported from California. This is the Fisher Peach, a sport found by C. Howard Fisher, of Ottawa, Canada, which ripened for the first time this season in Tulare County, California. The Peaches are unusually large for so early a variety, have a nice red color, and rich yellow flesh. The trees have a vigorous habit of growth and the sizes of fruit quite uniform. The parentage is supposed to trace back to an Elberta.—“Pacific Rural Press.”

NEW CALIFORNIAN CLING PEACH.

AN IMPROVED CLING PEACH has been developed in California, states the “Pacific Rural Press.” A cross between Lovell freestone and Sims cling, it does not cling too much to the pit, but does cling tenaciously to the branch, thereby lengthening the picking season and relieving the problem of harvest labor. This characteristic also allows the fruit to be left on the tree until properly ripe. It is being developed as a substitute for Phillips in the variety rotation.

TIN PLATE.

Supplies to be Controlled.

TINPLATE SUPPLIES are to be solely controlled by the Minister of Supply, who will be responsible for the acquiring and maintaining of adequate stocks in Australia. The Minister will also arrange distribution, the measure of priority, and compensation to unduly penalised users.

This is in accordance with the National Security Regulations gazetted on August 26, under which provision is also made for the creation of the Commonwealth Tinplate Board, members of which are as follows: Messrs. D. J. Pilmer (Chairman), C. Massey, S. W. Gadsden, F. B. Spencer, E. J. Bowater, A. W. Fairley, R. P. Allen.

CANNED VEGETABLES FOR A.I.F.

7,500,000 tins of assorted vegetables, 4,500,000 tins of Beans, and 2,250,000 tins of pork and Beans are sought after by the Department of Supply for the A.I.F. abroad. Therefore it will be necessary for thousands of additional acres of vegetables to be planted for canning purposes.

The Federal Cabinet has approved of the growing of special crops on a large scale as the result of an investigation into the growing, producing and purchasing of vegetables carried out by Mr. John Douglass, of the N.S.W. Department of Agriculture.

It is proposed that the Government experimental farms in N.S.W. produce the seed, which will be distributed to the growers.

As supplies from Japan are now cut off, the Department of Supply estimates that 2,000 acres of canning Beans will be needed next season, and growers will be guaranteed 20/- per bushel by the Government. The Little Navy variety of Bean is especially in demand.

EXPORT SUGAR REBATE.

The export sugar rebate for the month of October, 1941, has been fixed by the Committee as follows:—

| New Zealand— | Per ton. |
|----------------------|----------|
| Fruit products . . | £0 9 0 |
| Other goods . . . | 2 13 0 |
| Other Destinations— | |
| Fruit products . . . | 4 6 0 |
| Other goods . . . | 6 10 0 |

“FRUIT WORLD” APPRECIATED.

Dear Sir,
I have pleasure to enclose my cheque for subscription to “Fruit World.”

I have been a grower for half a century and can always find something to instruct and interest in its pages. One benefits from the others practical experience and the more it is compared together the better off we will be. Your efforts in “Fruit World” are conducive to that desirable attainment of purpose in like—share what we know—to get the best there is in it for all.

(Signed) CHARLES J. NASH.
Shepparton E., Vic., 18/8/41.

When export is once again possible —

Make a note that

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Will be pleased to receive supplies of

FRESH FRUIT

CANNED FRUIT — JAM — HONEY — PULPED FRUIT

BRANCHES OR AGENCIES IN ALL PORTS.
CORRESPONDENCE INVITED.
CABLES: “SEGURO,” LIVERPOOL.

MARKETING SUPERVISION UNDERTAKEN
THROUGHOUT GREAT BRITAIN FOR ASSOCIATIONS
OR GROUPS OF GROWERS OR PACKERS.

Members of
The National Federation of Fruit and Potato Trades Ltd. The Liverpool Fruit Importers Association Ltd.

Goulburn Valley (Vic.) News and Notes

Labor Shortage — Spraying for Black Spot

SEASONAL WORK in Goulburn Valley orchards is progressing favorably. Cultivating and preparing the land for irrigation are in full swing and the Bordeaux spray for Black Spot on Pears is just about completed. During last week (September 22) we had a very useful rain accompanied by heavy thunder, when over one inch of rain was recorded throughout the district, which will be of enormous benefit at this time of year, and has freshened up crops and pastures and orchards, after the long dry spell and exceptionally dry Winter, but more rain is still urgently needed.

Williams Pears are again blossoming well, also Packhams, but the Josephine and other varieties are showing very little blossom, and will apparently have a light crop.

All canning Peaches have set well, and show promise of a normal crop, while Apricots are patchy. Some varieties carrying good crop, while others are very light.

Shortage of Labor.

Great concern is felt amongst all fruitgrowers' organisations in the Valley at the extreme shortage of labor to harvest the coming fruit crop, as many hundreds of men are required at rush periods to get the crop off on time—unlike other fruit-growing districts, where the grower has at times weeks to get his crop off. Growers in the Goulburn Valley, especially with Apricots and canning Peaches, have only a few days at their disposal to harvest any one variety, and if sufficient labor is not available, the crop is lost by dropping on the ground.

With so many of our young men serving in the overseas forces, and the unprecedented rush of all classes of laborers into war work for munitions and other big city industries, the country has been depleted of labor, and the position has become most acute.

This problem has been anxiously discussed in private amongst fruit growers' meetings. Economics of the industry prevents the fruit from being grown on the cost-plus basis enjoyed by sheltered industries, and producers have to rely largely on export parity prices for their returns.

This rules out the prospect of offering attractive rates of pay for casual seasonal work.

Unlike many other primary industries, fruit cannot be allowed to remain indefinitely on the trees.

This causes periodic rushes in the harvest season, when the services of a very high proportion of casual labor has to be secured.

Mr. S. P. Cornish, Secretary of the Northern Fruit Growers' Association recently stated that

this Association was watching the labor position very carefully, but at present it was too premature to approach the Federal Government with any suggestions. It would first be necessary to ascertain the probable requirements of each grower, and this could not be done for some weeks.

Mr. Cornish also said that the use of prisoners of war for work in orchards would involve many difficulties, but he thought men might be released from militia camps to assist with the work. Just as it had been stated that men would be exempted in order that they could assist with the harvesting of wheat.

Petrol for Orchardists.

Following a suggestion by Mr. Fraser, Chairman of the Liquid Control Board during his recent visit to Shepparton. Representatives of the Shepparton Fruit Growers' Association met last week to discuss the question of petrol supplies for fruitgrowers.

A Committee comprising Mr. N. Fairless (President), A. Dobson (Secretary), and N. Hanlon, was appointed, and this Committee will in future handle all applications by fruitgrowers for petrol for trucks, tractors, etc.

Fruitgrowers are asked to forward their applications for petrol to Mr. A. Dobson, and those growers on the western side of the Goulburn, including Ardmona, Merrigum and Tatura, to Mr. S. P. Cornish, Secretary of the Northern Victoria Association.

Black Spot Spray.

The following information for fruitgrowers was issued by the Shepparton Fruitgrowers' Advisory Committee during the first week in September:

Black Spot spray for Pears.

The Bordeaux spray for Pears for the prevention of Black Spot requires to be applied at the finger tip stage.

The standard mixture for the spray is 6-4-40.

Growers probably are of the opinion that owing to the dry season, this spray is not necessary, but we would remind them that a sudden change in the weather bringing showery and humid conditions would create ideal conditions for Black Spot development. During past seasons, two sprays have been recommended during the bud opening stage, but if weather conditions do not alter before spraying, we consider one spray at the finger tip stage would be sufficient.

Josephine Pears should not be sprayed with Bordeaux at this stage.

Orchard Hygiene.

Growers are again reminded of the great benefits which accrue from careful attention to orchard hygiene: if they have not completed the scraping of tree butts, etc., for the eradica-

Western Australian Fruitgrowers' Association

RENEWAL OF APPLE AND PEAR ACQUISITION DESIRED — ORCHARD
REGISTRATION — PEST CONTROL — FACTORY LEMONS & ORANGES.
SUCCESSFUL ANNUAL CONFERENCE.

THE ANNUAL CONFERENCE of the Western Australian Fruitgrowers' Association was held at Perth on August 18 and 19, 1941, Mr. J. McNeil Martin presiding.

In declaring the Conference open, the Minister for Agriculture (Mr. F. J. S. Wise) said that one of the industries most affected by changed conditions was that of fruitgrowing. Western Australian delegates had strongly urged the adoption of the Apple and Pear acquisition scheme. There had been a feeling that the consumer was not adequately protected, but he was convinced after careful investigation that everything possible had been done to benefit both producer and consumer.

The annual report dealt in detail with the acquisition plan and the necessity for its continuance. Remaining instances of Black Spot were very few, due to the efforts of the Superintendent of Horticulture (Mr. H. R. Powell), his officers, and those growers whose orchards were affected. The Association had contributed to the funds for fighting the disease, but had notified the Department that, owing to shortage of funds, similar assistance in future would probably not be possible.

On behalf of the Northern Districts Council, Mr. D. J. Sutcliffe reported that there had been a strong demand for factory Lemons, and a particularly strong factory demand for Oranges for oil extraction. Local prices had been reasonably satisfactory and interstate export had been unnecessary. The Council proposed to call a conference of factory proprietors before the next Navel and Lemon season in an endeavor to arrange the local price in a man-

ner similar to that operating in the eastern States.

Orchard Registration Fee.

Resolutions were adopted affirming that effective Fruit Fly control was necessary and requesting the Government to extend the application of the Plant Diseases (Registration Fees) Act without a limit of period, but with provision for review at five yearly periods.

That the Government, in amending the Act should be requested to vary the rates to 2/- per acre with no maximum (in lieu of 2/6 per acre, with a maximum of £2/10/-), with a minimum as at present of 1/- per orchard."

That the Act be amended "to meet the points raised by the Department of Agriculture, viz.:—(1) Acreage to be defined as area (not number of trees or vines). (2) Plantings of young trees and/or vines in blocks of one acre or more to be exempt up to three years of age. (3) An appropriate definition of nurseries." It was decided to convey the Association's views to the vine-growing organisations seeking their support.

Two motions by the South Suburban branch, that all bags returned to growers from factories to be fumigated or dipped, and that the Government be asked to consider provision for the utilisation of surplus citrus fruit, were carried.

Dr. T. C. Dunne, of the Department of Agriculture, said that so far only one firm in Perth had been handling surplus citrus fruit for making fruit juices. Another firm was hoping to get machinery made in W.A. which would enable it to handle large quantities of surplus fruit in future.

Apple and Pear Acquisition.

Various aspects of the Apple and Pear acquisition scheme were discussed and the following resolution was carried:

"It is emphatically necessary that protection similar to that provided by the past acquisition schemes be continued until adequate exports are resumed and the executive be instructed to take all necessary steps to ensure this."

Mr. H. W. Soothill, deputy chairman, Apple and Pear Marketing Board, said he felt the necessity for the Federal Government to realise it must participate in the cost of the plan and not to expect that this could be conducted on a self-financing basis.

tion of over-wintering codling grubs: this must be completed before September 30.

Orchard Statistics.

Growers who have not returned forms recently sent to them are asked to complete and return same to the S.P.C. office at once.

Hail Insurance.

The last day for lodging proposals for hail insurance on Apricots is September 9. Peaches and Pears may be insured at the same time, but the last day for lodging proposals for these two fruits is September 30.

FRUIT BUYERS

LEMONS, ORANGES, GRAPEFRUIT,
PEARS, PEACHES, APRICOTS,
BERRIES, CHERRIES.

BROOKE'S LEMOS LTD.

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Conference carried a motion affirming the necessity for a local fund to be maintained for purposes similar to those provided by the Associations' Trust Fund, the income of which had ceased owing to the war.

It was agreed that such a fund being at present designed primarily to control diseases and pests threatening Apples and Pears, be created for Apple and Pear growers. It was recommended that State legislation be sought to enable collection of the levy, and that the maximum rate of the levy should be $\frac{1}{4}$ d. a bushel.

Another motion was carried favoring a hail insurance scheme at State rates within a Federal Government scheme, subject to suitable premiums, during the period of acquisition.

W.A. State Acquisition Committee.

Mr. G. Parke presented a report on the operations of the W.A. Committee of the Apple and Pear Marketing Board. He said that the total tree measurement of last season's crop of extra fancy and fancy grades was approximately 1,400,000 bushels of Apples and 85,000 cases of Pears. The total intake was 560,000 cases of Apples plus 5,700 bushels in paper bags, and 65,000 cases of Pears.

Compared with the corresponding period of the previous year sales this year would show an increase of 54,000 cases, said Mr. Parke. This was due mainly to the greater attention paid to country sales, an improvement in the quality of the fruit and to the publicity campaign. With total disposals for the season approximately 700,000 cases out of a crop of 1,400,000, it was evident that much of the crop could not possibly find a market. The committee had determined, therefore, that the fruit offered to the public should be of the best quality available. During the season arrangements were made for the production of approximately 90 tons of dried Apples, which involved the processing of between 35,000 and 40,000 bushels. The bulk of this fruit was being put in tin-lined boxes and shipped overseas for the fighting forces.

Unfair Press Attacks.

Mr. H. W. Soothill said that whereas the press of W.A. had revealed an understanding of the situation, many papers in the Eastern States had adopted an unfair and irresponsible attitude towards the scheme.

Office Bearers:

The following office-bearers were elected:—President, Mr. J. McN. Martin; Vice-President, Mr. E. S. Hester; Fruit Organisation Board, Messrs. H. J. Price, K. J. Hawter, C. R. Moore and T. G. Sounness, H. W. Soothill and G. Parke.

Dried Fruit Notes

A meeting of the S.A. Board was held on September 26, 1941, when a heavy agenda was dealt with.

The revised home consumption quotas as recommended by a special meeting of the Consultative Committee were approved; these were Currants 23 per cent., Sultanas 17 per cent., Lexias 39 per cent., and a determination was made accordingly.

A memorandum prepared by the Secretary (Mr. W. N. Twiss) for submission to the Minister of Agriculture in the matter of restriction of further plantings, was referred to the Consultative Committee with a view to a joint representation being made to the appropriate authorities by the Dried Fruits Boards of the riparian States.

A report by the Secretary on a survey of the Buck Currant position was also referred to the Consultative Committee.

An informative report on the 1941 season by the Supervising Grader in the Renmark area (Mr. P. J. Leighton) was received. This suggested that the Door Classification plan in operation in the Renmark area had not only produced a general higher standard of grading, but also pointed to an appreciable monetary gain to growers in that area.

The reports of the Investigation Officer of the N.S.W. Board (Mr. C. N. Hall) on his enquiries into alleged unlawful trading in Queensland were noted, and the Secretary reported on the joint action taken by the State Boards.

WESTERN AUSTRALIA.

Collie Apples in Demand.

Growers in Collie, W.A., are benefiting by the keen demand for their Apples, which are ordinarily exported. At the end of the harvesting season, 5,000 cases were cool stored, and large quantities of these are now being released on the West. Australian market, and also despatched to other centres.

W.A. PRIMARY PRODUCERS' CONFERENCE.

Appreciation of the large attendance of delegates was expressed by Mr. J. W. Diver, General President of the Primary Producers' Association, at the 1941 Conference held in Perth recently.

After dealing with the wheat, wool and dairy industries, the President stated that the fruit-grower branches had co-operated with the W.A. Fruitgrowers' Association in an effort to hold the industry together. "It must be admitted," stated Mr. Diver, "that, drastic as the acquisition may seem at times to be, it is the only alternative to overwhelming chaos."

A list of the matters which would appear on the agenda for the meeting of the Consultative Committee to be held on October 3, 1941, was submitted and the views of the Board on certain items were noted.

The matter of the manufacture of Prune juice was the subject of a report of an officer of the C.S.I.R. at the Homebush (N.S.W.) Laboratory, was noted with interest.

Reports by the Board's Investigation Officer (Inspector Noblet) on his visit to Whyalla and Port Augusta were submitted, together with a summary of Investigation Work for August, 1941.

Assessments of the Annual Contribution for the year 1941 in respect to two packing houses which had completed operations were approved, and an abstract showing the total pack of each variety of dried fruits to September 20, 1941, was laid on the table.

The financial statement showing the bank position was received and adopted and payment of a number of accounts was approved.

The Secretary submitted a copy of his letter to the W.A. Board conveying the sympathy of the members in the death of Mr. A. H. Dickson (Chairman of the W.A. Board). The Secretary's action was approved and the passing of Mr. Dickson, who was known personally to the members, was noted with deep regret.

DRIED FRUIT QUOTAS.

The Secretary of the Dried Fruits Board (Mr. W. N. Twiss) stated that the Interstate Committee of the Boards of the producing States had reviewed the statistical position in regard to Commonwealth sales to date of all varieties of dried fruit in relation to the total production for the year 1941.

The Committee has accordingly recommended the Boards of the producing States to adopt the following revised Home Consumption Quotas for dried vine fruits; for Currants 23 per cent.; for Sultanas 17 per cent., and for Lexias 39 per cent. The quota fixed for Sultanas will not apply to Western Australia, where the local market is able to absorb the total pack of this variety.

The Boards have since approved of the Committee's recommendation.

In regard to dried tree fruits, the existing quotas remain as the acquisition by the Commonwealth Government for Service purposes of substantial proportions of Prunes, dried Peaches, Apricots and Pears, has left the Australian market short.

W. AUST. DRIED FRUITS BOARD.

At the August meeting of the W.A. Dried Fruits Board, Mr. A. H. Dickson presided. The Secretary reported that dried vine fruits were included in parcels being made available to soldiers overseas.

1941 Pack: It was reported that the W.A. pack of dried fruits as at July 31 was as follows:—Currants 2,454 tons, Sultanas 302 tons, Lexias 165 tons. Correspondence dealt with revised Commonwealth quotes; Ohanez Grapes (used as fresh fruit and not deemed suitable for drying). It was reported that improvements were very necessary to the drying racks on some growers' properties.

Legal proceedings were being taken against a grower for alleged breach of the Dried Fruits Act.

Publicity activities were projected, particularly window displays.

VITICULTURE IN W. AUST.

The Viticulturists' Union of W.A. is actively operating. The office bearers are as follow:—Messrs. A. Brammall (Chairman), C. G. Edgecombe (Vice-Chairman), C. Sharman, J. Tomich, M. Kosovich, I. Kraljevich, S. Udiljack, G. Stone, J. Zekulich, I. Seman, A. Pervan, S. Anderson, E. Francis, H. E. Bailey, E. M. Kerruish (Treasurer), J. Duff (Secretary).

VITICULTURE.

Spraying Experiments with Vines.

Superiority of Bordeaux Mixture.

Experiments carried out by the Viticultural Branch of the N.S.W. Department of Agriculture during the Spring and Summer months of the seasons 1939-40 and 1940-41, in which certain proprietary fungicides were tried out against Bordeaux mixture as a general spray, four sprayings being given in each case, showed Bordeaux mixture to be superior. One proprietary mixture, applied as an early spray, did not burn as much as Bordeaux, but when applied as a late spray adhered too much to the berries, spoiling the appearance of the Grapes.

In the 1940-41 tests a cuprous oxide mixture was applied at the rates of 1 lb. to 24, 32 and 40 gallons of water, but not any of these mixtures proved satisfactory. Not only did the sprayed vines lack the healthy appearance of those sprayed with Bordeaux mixture, but the foliage began to fall early in the season and the Grapes did not ripen properly. In the 1939-40 tests stronger mixtures of cuprous oxide were used, but these proved too severe.

Victorian Crop Prospects

PEACHES PROMISE GOOD CROPS, APRICOTS PATCHY
— REWORKING FRUIT TREES — PEST AND DISEASE
CONTROL — PROTECTING VINES FROM FROST AND
FUNGUS DISEASES.

HORTICULTURAL CONDITIONS prevailing in Victoria during the month of September are reviewed in a report issued by the Department of Agriculture.

Although the shortage of skilled labor is being felt by many orchardists, the routine jobs of manuring, cultivating and pruning are being completed on time. Rain of general benefit to all fruits has fallen.

Pre-blossom spraying for the control of Black Spot on Apples and Pears was commenced towards the end of September. Particular attention was given to the use of Bordeaux mixture at the "green tip" stage on both Apples and Pears, because unsettled weather produced conditions favorable to the development of Black Spot.

Orchard Hygiene: In the Goulburn Valley, growers have been scraping the butts of Pear trees to destroy overwintering Codling Moth larvae. This practice has proved well worth-while, and should be adopted as a routine task throughout the State.

Peaches in the Goulburn Valley have blossomed well and good crops are expected, but Apricots are patchy. In southern districts, full crops of all stone fruits are expected. Almonds have blossomed freely in the northern part of the State, and a record crop of nuts is expected.

Considerable numbers of old and unwanted varieties of fruit trees have been grubbed out, and growers have reworked as many as possible to profitable varieties.

Red Spider infestation appears to have increased to some extent in recent years. An application of white oil emulsion (one gallon to eighty), combined with the pre-blossom Bordeaux mixture

spray, has been observed to have some controlling effect. The use of summer oil sprays, either alone or with lead arsenate for Codling Moth control, is also of value in reducing Red Spider infestation.

Vines have commenced growth, and so far no frost damage has occurred. Growers should not neglect preparations for orchard heating, because of the susceptibility of young growth to injury. Showery weather is likely to cause an outbreak of Black Spot, and Bordeaux spraying should be continued to protect the new shoots.

Citrus.

The Washington Navel harvest is nearing completion, although there is still some second crop fruit remaining on the trees. A good Spring flowering of citrus is expected. Sales of Lemons are slow, and because of the heavy crop to be distributed, prices are low.

Melbourne, 2/10/41.

The annual dinner of the N.S.W. Chamber of Fruit and Vegetable Industries will be held in Sydney on Saturday, October 18.

PASSIONFRUIT CULTURE.

Combating Black Spot.

Characteristic symptoms of the brown spot of Passion vine are brown circular spots on leaves and depressed brown lesions on fruits and stems, states a report from N.Z. When severe, the disease leads to defoliation, fruit shrivelling, reduction of carrying capacity, and of crop. Remedies suggested are pruning out and destruction of infected material, pruning and training of vines to allow of

spray penetration and periodic spraying with Bordeaux 3-4-50.

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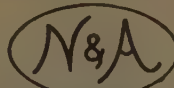
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Market Notes and Prices

FRUIT AND VEGETABLES IN ENGLAND.

Tomatoes 10/6 per lb.: Apples Unprocurable.

A recent report from the S. Aust. Agent General in London (Sir Charles McCann), states that bombing raids destroyed many glasshouses and the frosts reduced yields of early crops. Fruit was at a premium. Tomatoes went up to 10/6 a lb. England was destitute of fruit, except for a few shipments of poor quality Spanish Oranges. Apples were practically unobtainable.

The dry cold spell affected early vegetable crops. Green vegetables were scarce and expensive. Spring onions for instance were being sold for 1d. each. Recently the Ministry released a shipment of approximately 20,000 cases of Oranges to the London trade, but as a supply had to be reserved for the hospitals, the retail trade did not benefit.

Unfortunately, profiteering was reported which the Ministry is determined to avoid in future.

NEW SOUTH WALES.

Sydney: The following market notes and prices are issued by the State Marketing Bureau of N.S.W. for the week ended September 24.

Only light supplies of Apples went forward during the period. Both Victorian and local Yates were available; these, together with Democrats, were the principal red Apples on offer, although some Statesman arrived on the closing market. Stocks of Granny Smith were reduced considerably, and only limited lots of Delicious were available. Sturmers sold steadily at from 8/- to 10/- per bushel.

Only limited quantities of Pears were obtainable and were

of Victorian origin, comprising mainly Packham's Triumph.

Marketing of Valencia Oranges from many coastal areas is in progress, and this fruit is meeting a good inquiry at rates ranging up to 8/- per bushel.

Supplies of Navel Oranges showed a further falling off and, as demand was satisfactory, values were firmer both for coastal and Irrigation Area packs.

Choice Mandarins continued to sell well, but fruit inclined to puffiness and of small size was difficult to dispose of.

Demand for Lemons was dull and there was no improvement in values.

Bananas were well supplied, and rates were reduced in order to stimulate demand.

Owing to warmer weather conditions, inquiry for Pineapples improved and values advanced. Stocks cleared well between the bi-weekly consignments, and very few lots were carried over.

Fairly heavy supplies of Papaws came to hand, but demand generally was satisfactory.

Passionfruit of choice quality were lightly stocked and prices were higher.

Queensland Strawberries continued to arrive and rates for both packets and trays were firm.

Current quotations are:—

Apples: Local Granny Smith, 10/- to 13/-; Delicious, 12/- to 16/- (specials dearer); Yates, 12/- to 15/-; Interstate Sturmer, 8/- to 10/-; Democrat, 10/- to 12/- per case.

Pears: Interstate Packham's Triumph, 13/- to 16/- per case (few higher).

Bananas: Nines and Eights, 14/- to 16/-; Sevens, 11/- to 13/-; Sixes, 8/- to 10/ (specials in each grade higher, and ripe and inferior lots cheaper). **Papaws:** 6/- to 10/-; specials 12/-. **Pineapples:** 8/- to 12/- per tropical case.

Oranges: Navel, coastal, 6/- to 10/- (few higher); Irrigation Area, 8/- to 11/- per case and 14/- to 20/- per crate; Common, 3/6 to 6/- (few higher); Valencia, coastal, 5/- to 8/-. **Lemons:** Coastal, 2/- to 6/-. **Mandarins:** 6/- to 12/- (few specials dearer and small and inferior packs from 3/-). **Grapefruit:** Coastal, 4/- to 8/-; Inland, 6/- to 10/-; few specials to 14/- per case.

Passionfruit: Choice, 13/- to 16/-; other descriptions, 4/- to 10/- per half case.

Strawberries: Queensland, 9/- to 15/- per dozen packets; 3/- to 6/- (few dearer) per tray.

VICTORIA.

Melbourne (4/10/41): Apples, eating, 10/- to 15/-, few specials higher; cooking, 7/6 to 10/-, few special higher. Oranges, Navel, 5/- to 12/-, according to counts, few special higher. Lemons, average standards, 5/- to 7/-; good standards, to 8/-; selected, to 9/-. Grapefruit, 7/- to 13/-, few special higher. Mandarins, 8/- to 14/-, few special higher. Pears, dessert, Packhams, 9/- to 13/-, few higher; culinary, 7/- to 9/-. Papaws, Qld., 10/- to 14/- double case. Bananas, Qld. (green), 6's 8/- to 12/-, 7's 12/- to 15/-; 8's and 9's 15/- to 16/- double case, few special higher. Passionfruit, 3/- to 15/- half case, few higher. Pineapples, Qld., 8/- to 12/- double case.

SYDNEY MARKETS.

Is Forestalling Prevalent?

A deputation from the Australian Labor Housewives League met the Lord Mayor, Cr. Crick, recently, stating that "forestallers" were operating in the Sydney Markets to the detriment of growers and the public, and that City Council employees must be aware of the malpractices.

The Lord Mayor, in reply, said that the high prices of vegetables was not the result of forestalling or jobbing, but prices had been affected by drought conditions, shortage of labor, petrol rationing and smaller plantings.

At a special meeting of the Australian Fruiterers' and Greengrocers' Association, the President, Mr. T. M. Bowers, said that forestallers were operating to the detriment of growers, sellers and the public. It was decided to send a deputa-

tion to the Minister for Agriculture, Mr. Dunn, in regard to this matter, also requesting the enforcement of the market by-laws for entry at 7 a.m. The Association also seeks 6 p.m. closing for all fruit shops and no Sunday trading.

Several growers at Gosford gave instances of forestalling with regard to Peas, Beans, and Cabbages.

The Superintendent of Markets, Mr. Hills, stated the operations of alleged forestallers was non-existent.

THE QUEENSLAND CHAMBER OF FRUIT AND VEGETABLE INDUSTRIES LIMITED.

The first annual meeting of the Queensland Chamber of Fruit and Vegetable Industries was held at Brisbane recently. The Chamber is the official organisation at the Brisbane Markets, and its members comprise practically all of the principal fruit and vegetable agents.

The election of office-bearers for the ensuing twelve months resulted in Mr. J. H. Leavy being re-elected President; Messrs. L. Martin and R. G. Livingstone, Vice-Presidents; Mr. T. S. Bowen, Treasurer; and the Executive comprising Messrs. H. Geeves, W. M. Guttormsen, A. L. Justins, R. Murray, P. McCowan, and H. L. Wool.

In reviewing the activities of the Chamber the President referred to a number of reforms in the trade effected during the year, including the "Second-hand Fruit Cases Act," which is administered partly by this Chamber. Under the Act fruit cases are collected by licensed dealers and resold to the growers, thus ensuring a continuity of supplies

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of cases. Prior to this the growers had become concerned with the threatened shortage of cases owing to the restriction of nails with nail wire being diverted to munition work.

The Chamber has also assisted the Sub-Committee of the Apple and Pear Board in the operation

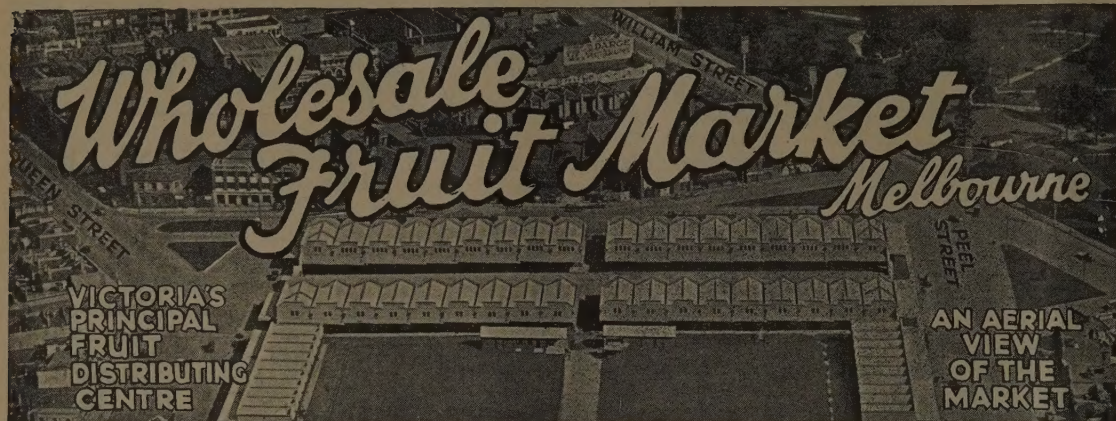
of the scheme in Queensland, and it was believed that thereby many anomalies have been straightened out.

The Secretary is Mr. J. C. Larwill, 180 Queen-street, Brisbane.

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YOUNG FARMERS

SOME VICTORIAN ACTIVITIES.

Wonga Park: A local orchardist pruned the 77 fruit trees planted in the school ground. The principles of pruning are included in the school curriculum which covers many phases of the fruit industry. The Club is most appreciative of the valuable assistance of Mr. Cole, Horticultural Inspector of the Department of Agriculture.

The 23 pupils of the school have already planted, as onion seed for Britain, a bag of bulbs donated by the Lilydale Shire.

Warrandyte: Apples, Pears and Plums, fifteen varieties in all, have been planted by the Warrandyte South Young Farmers' Club in their tree planting demonstration. The members were instructed by Mr. Coleman, a local orchardist.

Mooroolbark: The Supervisor of the Victorian Young Farmers' Clubs Association recently visited the Mooroolbark Club to see the members sowing onion bulbs, a donation from the Lilydale Shire, for seed to be sent to Great Britain.

Mooroopna: The McDonald Shield competition was held at Mooroopna North on August 29, for which a Field Day was arranged. Club Supervisors adjudicated.

Ravenswood: Mr. E. Winch recently directed the pruning of trees in the orchard of the Ravenswood South Young Farmers' Club. Senior members had been prompted by the keenness of the younger members to assist in the preparation of the orchard. At the recent Arbor Day, Mr. J. Comini gave great assistance in the planting of gums and pines.

Fryerstown: Keen local interest is taken in the good progress of the White Leghorns and Australorps belonging to the poultry club at Fryerstown and a weekly report is posted at the store.

Queensland

FRUIT FLY CONTROL

FORMULA AND METHOD OF PREPARING AND USING ROBINSON LURE.

The full rights to the Robinson Fruit Fly Lure have been purchased by the Committee of Direction of Fruit Marketing, Brisbane, from Messrs. F. C. and W. R. Robinson, of Gayndah, Queensland.

The following is the method of preparing and using the Robinson Lure as employed by Messrs. F. C. and W. R. Robinson with such success on their Gayndah citrus orchard.

In publishing this report, the C.O.D. acknowledges the great assistance rendered by the Department of Agriculture, which, throughout the negotiations, lent every possible help.

Formula.

The formula of Robinson's lure is as follows:—Powdered Orris root, 5 heaped teaspoons; Scrubb's household ammonia, 3½ teaspoons; imitation vanilla essence, 1 teaspoon (barely full); molasses, 1 teaspoon (barely full); corrosive sublimate, a quantity about twice the size of a match head.

Preparation of the Lure.

The ingredients are added in the order given above to a clean beer bottle (or any other bottle of the same size), which is then half filled with water, shaken thoroughly and tightly corked.

In hot weather, this should be done early in the afternoon, but in the cooler months mixing should take place during the morning. The bottle is shaken periodically until about nightfall when, after a final shaking, sufficient water is added to fill the bottle. Next morning the liquid is gently poured off into another bottle so that the sediment is left behind. To one-third of an ordinary breakfast cup of this liquid, sufficient water is added to fill the cup, the contents of which are then poured into the trap. The dilution of the liquid is done as the traps are being filled.

About half to one cupful of water is added to the sediment left in the original bottle as soon as the liquid used for charging traps has been poured off. The bottle is then corked and allowed to stand, with an occasional shaking, until the next lot of lure is required in, say, two or three days' time. The liquid is then poured into a second bottle containing the ingredients in the lure formula and sufficient water is added to half fill it. This bottle is shaken periodically during the day, filled with water at nightfall and allowed to stand overnight. The fluid is poured off and used for charging the traps in the manner already described. Between half and one cupful of water is added to the remaining sediment, which is then retained for use in the third batch of lure.

The same set of bottles should be used throughout the season, for the lure usually works most

satisfactorily after the third batch has been mixed. Bottles should be rinsed with cold water after being emptied.

Operations in the Orchard.

Traps should be charged with lure and hung in the trees in the early afternoon.

The higher the prevailing temperatures and the greater the number of flies caught, the more frequently should the lure be changed. Thus in the Summer, the lure is rarely left for more than three days before being changed, but in the late Autumn a period of five days might pass before recharging is necessary. The traps should never be fouled by decomposing flies; if this occurs the efficiency will be lessened for some time in spite of subsequent cleanings and rechargings.

The same traps should be used throughout the season, but they should be rinsed two or three times with water before each recharging. By inserting a small piece of rag into the trap and shaking, sediment sticking to the glass is removed.

Traps with and without legs have both been used and appear to be equally satisfactory.

Luring should be commenced early in the season before any fruit becomes attractive to the fly and should be continued until the crop is picked or until the fly numbers become negligible as a result of trapping or of weather conditions.

In the Gayndah district, trapping should begin in January or early February and continue until the first frosts occur, probably towards the end of May. A few test traps should be sufficient to start with, but the full series must be brought into use as soon as the fly numbers become large.

Even after the fly population has been reduced to apparently harmless proportions, a few traps should be kept going in good trapping trees round the orchard so that, should any change in the fly position occur it will be immediately shown by the numbers caught in these test traps. The appropriate measures can then be taken, that is, the number of traps can be again increased.

Traps should be hung in those trees which are known to be

specially attractive to the fly. Such trees exist in most orchards, and experienced growers soon come to recognise them. In the Gayndah district these trees are usually fairly large, well foliated but open.

If possible, traps should be placed in trees known to be attractive to fly and close to those which are to be protected.

Two to four traps should be placed in each of the selected trapping trees, the traps being hung on convenient branches in a shaded position.

About 40 traps have been used to protect successfully an orchard of about 14 acres, consisting of about 100 Lemons, 100 Grapefruit, 250 Beauty of Glen Retreat Mandarins, 180 Ellendale Mandarins, 60 Emperor of Canton Mandarins, 150 Navel Oranges, 350 Late Valencia Oranges, and 70 miscellaneous varieties. Of these the Lemons and Late Valencia Oranges are not subject to fly attack.

Fallen fruit should be picked up regularly at least once a week and destroyed or buried so that no breeding can take place in it. This is a very important part of the fly control operations, especially in the early part of the season. — "Queensland Producer."

QUEENSLAND.

Meeting of Banana Sectional Group Committee.

A MEETING of the Banana Sectional Group Committee was held in the offices of the Committee of Direction of Fruit Marketing, Brisbane, on August 26 and 27. There were present Messrs. W. J. Branch, A. W. Chapman, W. A. H. Cheales, E. J. Coghlan, H. Groom, V. J. Smith, A. S. Want and A. K. G. Watt. Mr. Chapman was elected temporary Chairman.

Case Timber and Nail Position.

The Manager reported that many steps had been taken to assist the growers with respect to supply of case timber and nails, and the Second-hand Fruit Case Act had been introduced to alleviate the position. The Committee of Direction had been of considerable assistance in

building up large stocks in its own stores and financing approved growers. However, satisfactory supplies of cases were still uncertain in view of the Commonwealth Government's restriction on the use of Pine for fruit cases.

Banana Advertising.

The Committee approved of an advertising campaign in Queensland and agreed that £500 be allocated for an arrangement between the Banana Growers' Federation and the C.O.D. to sponsor an interstate campaign.

It was decided that a congratulatory letter be sent to the Banana Growers' Federation, Melbourne, regarding the success of their Southern Banana Advertising Campaign.

VALUE OF BEES IN THE ORCHARD.

A Seasonable Reminder.

As agents of fertilization of the blossoms, bees perform an important function for the fruit-grower, and the maintenance of two or three colonies per acre can be recommended as a means of materially increasing the quantity and quality of his crop, states the N.S.W. Department of Agriculture. A small apiary is also a source of a useful subsidiary income, as well as a wholesome food for domestic use. Now, with the season just starting, is a good time to establish the hives.

The site upon which the apiary is placed need not be in the orchard. A small allotment of ground may be selected where the bees are not likely to be disturbed when cultivating. The land should be fairly level and well drained, and the hives should for preference face the north-east. A trellis of Passion Vines around the plot makes an ideal windbreak, and affords protection to the hives both in Summer and in Winter.

VALUE OF LIQUID MANURE.

New Zealand Farmer Achieves Success.

A Taranaki farmer has increased the carrying capacity of his farm from 53 to 85 cows by the use of liquid manure washed down from the cow bails. It was found that from three cows came twelve gallons of liquid manure which was sufficient to treat one acre per year. Phosphate manures and lime were used at the rate of about 3 cwt. per acre, the liquid manure being additional.



SPECIAL NOTICE TO FRUITGROWERS

In response to numerous requests from growers for information as to who are members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA, the following list is given. All are members of the above Association, and are registered firms carrying on business in the WHOLESALE FRUIT MARKET, MELBOURNE. (All Members under Fidelity Bond)

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REGAN & KENNY (Successors to Wm. Sweeney) (33).

Office: 21 Wholesale Fruit Market, Queen St., Melbourne, Phone: F 4866.

Correspondence is invited by the Association.

WOMEN'S LAND ARMY.

The organisation of a women's land army to relieve the labor shortage in primary industries has been recommended to the Federal Government in the progress report of the Joint Parliamentary Committee on Rural Industries. The report stated that much greater use could be made of the services of women and girls, particularly in fruit-growing, poultry farming, dairying and flax growing. As proper training was essential it was considered that practical training schools should be established in centres around which women were likely to be employed.

It was noted that a women's land army had already been organised on a voluntary basis in some States, and such organisations could form the nucleus of a Government subsidised plan.

The Committee's recommendations were not unanimous. Senator Aylett disagreed, expressing the view that the scheme would involve the Government in unnecessary expense in view of the serious shortage of female domestic labor.

The report also recommended more sympathetic consideration of genuine appeals to exemption from military service for key men from rural industries during peak periods.

The Committee reported there was a shortage of certain essential materials, especially fertilizers. It is proposed to continue the investigation into the supply and price of fertilizers.

With reference to the foregoing, Mr. Holt, Minister for Labor, said that alterations had been made regarding reserved occupations.

Under the revised list exemption age of farm hands singly employed had been reduced from 25 to 21, and that of leading hands to 29. Permanently employed hands to 30 and over were also in the reserved list.

Mrs. Weber, M.L.A., has been very active in Victoria in promoting the women's land army. Mrs. Weber states that the Commonwealth should recruit the women's land army in the same way as women are selected for V.A.D. work overseas. Ordinary members should be paid at least 4/- a day with keep and a £40 allowance for clothing and equipment. Hostels could be established in country towns. Mrs. Weber states that the Victorian State Committee of the Apple and Pear Marketing Board was sending out a questionnaire to orchardists asking them to state their labor re-

quirements. The need for adequate training was emphasised.

A unit of the women's land army has been in training for some time at the orchard of Mr. W. A. Thiele, Doncaster (Vic.). Mr. Thiele states that the students quickly learnt the art of pruning and packing.

LONG-TERM MANURIAL EXPERIMENTS.

Value of Complete Fertilizer—Nitrogen, Potash, Phosphate. Interesting Tests in New Zealand.

THE LONG-TERM MANURIAL EXPERIMENTS at Upper Moutere, N.Z., now show in a very marked manner the effect of the omission from the manures on different blocks, of nitrogen, potash and phosphate, states a recent report from the Cawthron Institute, Nelson, N.Z. On this poor phase of the Moutere Hills soil, Jonathan trees show the great importance of using a complete manure containing nitrogen, potash and phosphate. All other treatments in which one or more of the plant foods have been omitted are markedly inferior to those with the complete treatment. One of the interesting features of the experiments is the rapid decline of the trees receiving nitrogen and phosphate without potash. For several years the effect of the omission of potash was not marked, but during the last three years there has been a great decline in growth and foliage development while the fruit has been poor in color, size and quality.

Trees receiving potash and nitrogen without phosphate are now definitely inferior to those receiving complete fertilizer treatment. Growth of tree is not so good, foliage development is poorer, while yield of fruit tends to be lower. Trees receiving 2 lb. of dried blood in a complete manure are now very much superior to those receiving only 1 lb. dried blood per tree. Plots receiving nitrogen only, are now little better in growth and yield of fruit than those receiving no treatment. These long-term manurial experiments are of great importance to the Nelson Apple industry in that they show the importance of the different plant foods in Apple production and provide much valuable material for nutritional studies and investigations.

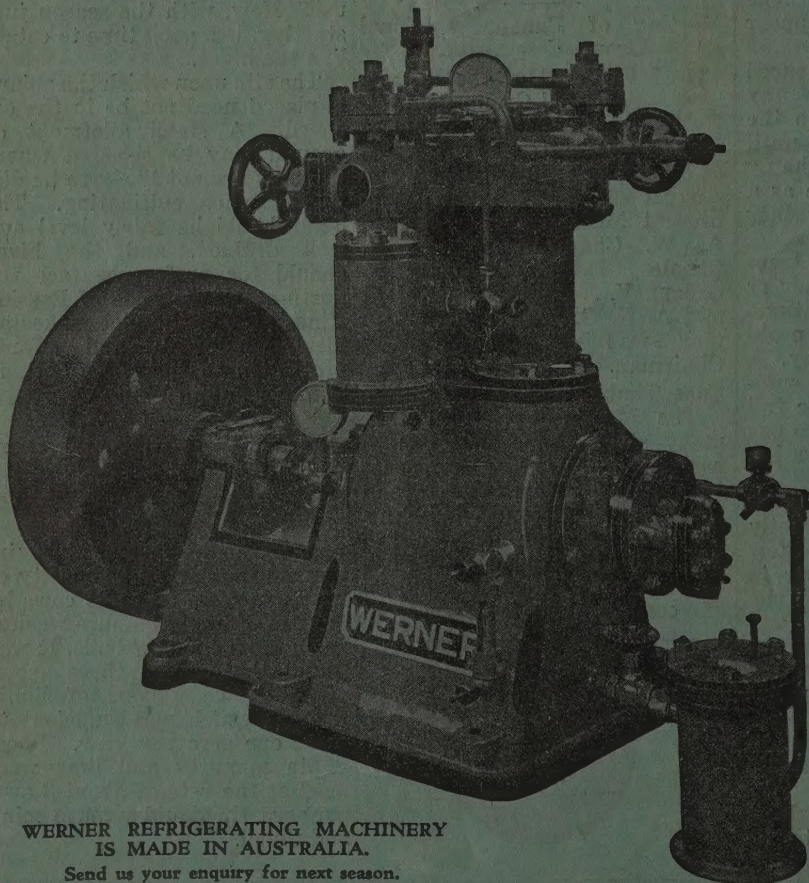
VALUE OF FISH-MEAL AS PIG FEED.

From experiments by the South Australian Dept. of Agric. it has been found that fish-meal and barley (where fish-meal replaces meatmeal to an equal monetary value) gives slightly faster development of pigs, but results in greater production costs. Other trials have shown that weight for weight, fish-meal is equal to meatmeal in protein value.

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